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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Reissue Application of :

BILL L. DAVIS and JESSE S. WILLIAMSON

For Reissue of U.S. Patent 5,630,393

Issued May 20, 1997

Serial No. 08/515,097

Filing Date: May 20, 1999

Serial No: 09/315,796

For: COMBINED LITHOGRAPHIC/
FLEXOGRAPHIC PRINTING
APPARATUS AND PROCESS



Group Art Unit:
2854

Examiner:
S. Funk

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SUPPLEMENTAL DECLARATION OF RAYMOND J. PRINCE

I, Raymond J. Prince, under penalties of perjury declare and state the following:

1. I am the same Raymond J. Prince who made a declaration in May 1999 submitted with the original application for reissue, and reaffirm the statements made therein.
2. I have been asked to review once again U. S. Patent 5,630,363, specifically in reference to an office action in reissue application Serial No. 09/315,796, as well as European Patent Application EP 741 025 - A2 cited in that office action, and give my opinion as to its teachings to one of ordinary skill in the printing arts and respond to specific questions concerning (1) the teaching of the sentence of col. 1, line 54-55 : "Many sheetfed presses can perfect (print both sides of the paper) in one pass through the press." as that sentence impacts the scope of the invention taught to the printing artisan, and (2) the correct interpretation of the term "over" in the specification and claims. In addition I have been asked to explain the meaning of the statement "continuous in-line process" and the printing terms "perfecting", "perfector", "perfecting press", "overcoating", "on top of", and "overprinting". Finally, I have been asked to give my opinion concerning the adequacy of each of the '383 patent claims being reissued and the impact as to patentability of EP 741 025 - A2 concerning claims 1 - 87 sought to be reissued as originally filed. This document is intended to supplement my first Declaration of May 1999.

SUPPLEMENTAL DECLARATION OF RAYMOND J. PRINCE

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3. I have received a portion of an office action in the captioned application and understandings dated February 8, 2000 concerning a rejection of claims 44 - 87 under 35 U.S.C. section 251 as allegedly lacking support in the specification, attached hereto as Exhibit A. I have also reviewed reissue applicants originally filed reissue claims as filed 1-87, Exhibit B. **For the reasons that follow in paragraphs 4 -10 below, I disagree with the examiner's conclusions in Exhibit A, and conclude claims 1-87 are supported by the specification of the '363 patent being reissued.**

4. The terminology of the printing industry has gone through many changes in the past 500 years, it can get a bit complex to the lay person with words having many meanings depending on how they are used.

(A.) "Perfecting" means to print on both sides of the sheet or web in one pass through the press. Most web presses sold today and in the last 20 years are perfecting presses. These presses operate using a blanket to blanket cylinder approach. Therefore every time the word web is used in '363 patent it means a "perfecting process".

(B.) Press manufacturers will refer to a "perfecting press" by the number of colors, and where the perfecting unit is. A 6-color press with the perfecting unit between units 2 and 3 would be referred to as a "2 over 4 unit". It can print 2 colors and turn the sheet and print 4 more colors. One can purchase 1 over 5 presses as well as 2 over 2 presses and just about every combination one can think of.

(C.) Another way of expressing the above (B.) is to describe a 6- color press with a "perfecting" unit between units 2 and 3 would be to state is as a "2/4 press".

5. The term "single in-line continuous printing process" in the '363 patent also refers to a "perfecting press". A prime example is a web offset press, which prints on both sides of the web of paper, that begins with a roll of paper and ends with a folded signature of final product. It may also refer in a sheetfed plant to a perfecting press in which unprinted paper is fed into the press and a sheet printed on both sides is delivered. A press that cannot print on both sides in one pass is not a "single in-line continuous printing process".

6. Based on the above teachings of "perfector", together with the teachings of printing "over" and "single in-line continuous printing process", claims 44 -87 of the '363 reissue application are based on a perfecting press as described in '363, and are well supported by the teachings of the '363 patent.

7. The term "overcoating" can be used with a press that does "perfect" as well as with a press that does not "perfect". The term means to apply a material/coating over a previously applied material. Printing "on top of" is synonymous with "overprinting" -- printing on the same side of -- which is a subset of printing "over" in which the second or downstream unit can also print on the reverse side of the substrate.

8. In column 4 lines, 29 and 43 of the '363 patent, reference is made to printing an image "over" a previously printed image. In column 4 line 38 of the '363 patent overcoating can apply to a perfecting press or a non- perfecting press, the preferred method would be to accomplish this on one pass through the press (a in-line continuous printing process), a perfector. Generally when the term "overcoating" is used in the art, it is used to describe the use of a final coating of a gloss, dull or matt water based or UV coating to improve finish (visual) and or rub resistance.

9. In reviewing column 7, lines 52-60 of the '363 patent, the language "on top of" is only describing one way printing works, using reissue applicants process. This is the same on a "perfecting" or non-perfecting press.

10. In independent '363 claims 44,53,55,58,60,72,82 and 86 use the terminology "thin controlled layers". This terminology is merely referring to ink or coatings, i.e. images. One skilled in the art would know they are synonymous.

11. I have also been asked to review the process aspects of EP 741,025A2 ('025") in conjunction, and rejections, of claims 1 - 87 based on anticipation (35 U.S.C sec 102) and obviousness (35 U.S.C. sec 103) by the examiner, in the same office action, the pertinent portion attached hereto as Exhibit C. I understand that the examiner believes the invention of reissue claims 1-6, 9-20, 22-25, and 28-38 are taught by the '025, i.e. "anticapated", and the remaining claims "obvious". I understand a publication is anticipatory if it puts one of average skill in the art in possession of the claimed intention at the time of (filing date) of the claimed invention. I understand that a referral make a claims invention obvious if the claimed invention as a whole was obvious to perform or to do as of the filing date of the claimed invention. **I strongly disagree with the examiner and I found claims 1 - 87 cannot be anticipated or made obvious by the '025 even if it is prior art (which I cannot see how, the '025 was published in late 1996 and the filing date of the '363 is in 1995).** In examining EP 0 741 025 A2, I conclude:

- (1.) There is no reference to "perfecting" in the '025;
- (2.) The '025 application refers to "overprinting" which is not "perfecting", and which is not synonymous with "printing over";

(3.) There is no mention of a "single in-line continuous printing process" in the '025;

(4.) The '025 application expounds the cantilever approach and its design rather than a process-- the cantilever design has been in use throughout history, and I find it hard to believe that valid cantilevered apparatus claim's for the particular cantilever disclosed could be an issue in any industrial country;

(5.) Cantilevered coaters, as described in the '025 and variations thereof, was traditionally placed at the end of a presses as of 1995, not between units;

(6.) The '025 application would not even as of May 1995 adequately describe or enable one in the art to teach the '363 process. It does not adequately teach the '363 process, give a background as to the problems in the art, i.e. the problems with the WIMS patent listed below, nor does it provide the process. Further, benefits as does the '363 patent, it therefore, in my opinion, does not place the artisan in 1995 in possession of the '363 invention. Specifically, while column 2 lines 40-45 of the EP 0 741 025 A2 suggests that a flexographic unit could possibly be placed ahead of a lithographic unit, the application does not spell out any benefits -- there is no appreciation shown for doing flexography first--, in fact, the first part of col. 2 of EP 741 025 A2 specifically indicates that the cantilevered device can be put at the last unit, as it was done traditionally, or between units, which has a dramatically different effect. Absent (a) being taught the benefits of performing flexography first (see, e.g., col. 4, lines 10 - 20 and col. 6, line 37 - col. 8, line 27 in the Davis et al.'363), and the problems those benefits solved (see columns 3, and 4, lines 1-9 of the '363 and (b) knowing about the reissue applicants assignees prior "WIMS" patent U.S. 5,370,976 (incorporated by reference in the '363 patent at col. 8, line 11), the artisan would not have had any motivation to try flexography prior to lithography in 1995 -- there is no reasonable expectation of reissue applicants' success. Moving a rack-back up front in the lithographic press in 1995 was an expensive undertaking. Moreover, in 1995 flexography was regulated generally to lower quality work in the industry and if combined with lithography it was placed at the end of the press to apply coatings and in rare instances metallic pigment in suspension in a waterbased coating. The flexography units in commercial use could not be physically placed between units due to size, without expensive modification. Further, the so-called "rack backs" available in 1994 or early 1995 for flexographic use were designed strictly for end of press installation. In addition there was

no technical reason indicated in the '025 application to place one or more flexo units between or ahead of lithographic units due to quality. The WIMS '976 patent is not mentioned, let alone incorporated by reference in the '025. Recently there has been great progress in the flexographic process and in particular the quality of plates and inks as well as coatings. Today flexography is capable of very high quality work. Many wine labels as well as high quality flexible packaging for example potato chip bags are now done by the flexographic process. This quality was not generally available in mid 1995; and

(7.) About 90% of the '025 patent publication is devoted to the teaching of the design of the cantilevered device, not a process. The teaching of the process is inadequate. The remainder of the publication does not instruct unequivocally the artisan how to perform reissue applicants process or provide benefits. It throws out to the reader is an opportunity to try it, without reason or motivation. Absent a teaching of reissue applicants found benefits and an incorporation of WIMS U.S. Pat. 5,370,976, and interpretation of the '025 patent as teaching claims 1-6, 9-20, 22-25 or 28-38, it is an exercise in sheer hindsight -- it is reading the '025 patent not as one in the art would have read it on May 4, 1995 (the '025 priority date), but in 1997 or later with the '363 in front of the printer. The '025 does not teach the benefits of the '363 process -- bizarre in my opion in 1995 unless someone knew about it. It does not mandate using flexography first -- a fatal shortcoming in view of the fact it does not mention, let alone incorporate WIMS U.S. Pat. 5,370,976. 90% of the '025 teaching is about a cantilevered apparatus, the type of which was already in the art. No mention is made of the use of halftones. There is inadequate teaching of the use of blanket cylinders. I disagree that the teaching of claims 11-20 or 22-25 or 28 exists in the '025 in hindsight, ignoring the shortcoming of lack of incorporation of WIMS '976 and the outstanding results in reissue applicants process. In my opinion claims 7-9, 11-28 and 39-87 are clearly not taught, even in hindsight. Most importantly because of the failure of the '025 applicants to teach the benefits of the '363 patent and because of the failure to incorporate by reference WIMS '976, one skilled in the printing art is not in possession of even broad claims 1-6, 10, or 29-38 as of May, 1995. Such a reading would be pure hindsight.

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The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application of any reissue thereon.


Raymond J. Prince
3/15/2000
Date

2025 RELEASE UNDER E.O. 14176

Supplemental Prince Exhibit A

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Claims 42 - 87 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

First, in each of independent claims 44, 53, 55, 58, 60, 72, 80 - 82, and 85 - 87 and dependent claims 42, 43, and 49 the recitations of printing on "both sides, opposite sides, or the reverse side" of the substrate is not supported by the original disclosure. Other than the brief mention of perfector printing in column 2 lines 54 - 55 with respect to prior art sheet fed presses there is no other discussion of perfector printing or printing on opposite, both, or the reverse side of the substrate in the original disclosure. Furthermore, the terms "over" and "on top of" are used interchangeably in the specification and in no instance is it implied that sometimes the

term "over" refers to perfector printing. Specifically, the meaning of the term "over" in context in column 4 lines 29 and 43 (applicant's declaration incorrectly refers to column 5) is no different than the context meaning of "over" in column 4 line 38 (again the declaration incorrectly refers to column 5) and column 6 line 3. Applicant's apparent argument that the use of this term with "overcoating" in the latter two instances clearly implies on the same side of the substrate but the first two instances of "over" with reference to "color images" implies perfector printing is without merit and self serving. Note original claims 29 and 34 in the parent application and column 7 lines 52 - 60 which state that additional "colored ink images" are printed "on top of" the previously printed image, thus, referring to printing on the same side of the substrate which contradicts applicant's assertion. Additionally, the use of the term "over" does not have any connotation of perfector printing in the art without being first preceded by "turning" or "flipping" and only with specific reference to the substrate. Lastly, the Declaration of Raymond J. Prince provides no objective evidence that the term "over" can refer to perfector printing and none of the exhibits provided in this declaration use the term "over" with respect to perfector printing.

Second, in independent claims 44, 53, 55, 58, 60, 72, 82, and 86 the terminology of applying "thin, controlled layers" to the substrate has no support in the original disclosure and, furthermore, has no clear scope or meaning.

Claims 42 - 87 are rejected under 35 U.S.C. 251 as being based upon new matter added to the patent for which reissue is sought.

Supplemental Prince Exhibit B

09315296 - 054301

Reissue of U. S. Patent No. 5,630,363

CLAIMS

Note: Bracketed material in the following claims has been deleted from U. S. Patent 5,630,363 as issued; underlined materials, including new claims 42-84 has been added.

1. Apparatus for a combined lithographic/flexographic printing process comprising:
 - a substrate;
 - a plurality of successive printing stations for printing color images on the substrate in a continuous in-line process;
 - one of said stations comprising a flexographic printing station for printing a liquid vehicle image on said substrate with a slurry containing an encapsulated essence using the flexographic process;
 - at least one of said successive printing stations being a lithographic printing station; and
 - an overcoating applied over the liquid vehicle image on the printed substrate at at least one of said successive lithographic printing stations using the lithographic process in said continuous in-line process.

2. Apparatus as in claim 1 wherein said overcoating is an aqueous overcoating.
3. Apparatus as in claim 1 wherein said overcoating is an ultraviolet ink overcoating.
4. Apparatus as in claim 1 wherein:
 - said substrate is a paper sheet; and

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said apparatus includes a sheet feeder.

5. Apparatus as in claim 1 wherein:

said substrate is a web; and

said apparatus includes a web feeder.

6. Apparatus for a combined lithographic/flexographic printing process comprising:

a plurality of successive printing stations for printing color images on a substrate in a continuous in-line process;

one of said stations comprising a flexographic printing station printing an aqueous-based vehicle image using the flexographic process to form a metallic coating;

a suspended metallic material being included in said aqueous-based vehicle image; and

at least one of the successive printing stations comprising an offset lithographic printing station printing a color image over the aqueous-based vehicle image using the offset lithographic process in said continuous in-line process.

7. Apparatus as in claim 6 wherein said suspended material includes uniform-sized metal particles to form said metallic coating.

8. Apparatus as in claim 6 wherein said suspended material includes nonuniform-sized metal particles to form said metallic coating.

9. Apparatus as in claim 6 further including: said flexographic printing station including a plate cylinder having a flexographic plate thereon, a blanket cylinder, and an impression cylinder;

a flexographic plate image transferred from said plate cylinder to said blanket cylinder, said image being formed of said metallic coating, said blanket cylinder transferring said metallic coating to said impression

cylinder for printing said flexographic plate image on said substrate; and

an anilox roller associated with said flexographic plate for supplying said aqueous-based vehicle containing said suspended metallic material to said flexographic plate.

10. Apparatus for creating a combined lithographic/flexographic printing process comprising:

a plurality of successive printing stations for printing color images on a substrate in a continuous in-line process;

one of said stations comprising a flexographic printing station for printing a first color image using the flexographic process; and

at least one of the successive printing stations comprising an offset lithographic printing station for printing a second color image over the first color image using the offset lithographic process in said continuous in-line process.

11. Apparatus as in claim 10 further including:

said flexographic printing station including a plate cylinder, a blanket cylinder, and an impression cylinder;

a flexographic plate on said plate cylinder;

an anilox roller associated with said flexographic plate for supplying a first color to said flexographic plate to form said first color image; and

said blanket cylinder receiving said first color image from said plate cylinder and transferring said first color image to said impression cylinder for printing on said substrate.

12. Apparatus for creating a combined lithographic/flexographic printing process comprising:

a substrate;

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a plurality of successive printing stations for printing color images on the substrate in a continuous in-line process;

at least two successive ones of said printing stations being flexography stations and comprising:

(1) a supply of liquid coating;

(2) a plate cylinder associated with a blanket cylinder, said plate cylinder having a flexographic plate thereon;

(3) an anilox roller associated with said liquid supply coating and said plate cylinder for delivering said liquid coating to said flexographic plate to form an image for transfer to said blanket cylinder;

(4) an impression cylinder for receiving said liquid coating image transferred from said blanket cylinder and printing said image on said substrate, said at least two flexography stations printing the same liquid coating image in sequence and in superimposed relationship; and

at least one offset lithographic printing station for receiving said substrate and printing over said liquid coating image.

13. Apparatus as in claim 12 wherein said liquid coating image printed on said substrate is a white color ink.

14. Apparatus as in claim 12 further including an air dryer associated with each of said impression cylinders on said flexography stations, said air dryer having sufficient air velocity for drying said liquid coating before the substrate is transferred to the successive printing station in said continuous in-line process.

15. Apparatus for a combined lithographic/flexographic printing process comprising:

a plurality of successive printing stations for printing color images on a substrate in a continuous in-line process, said printing stations including both lithographic and flexographic printing stations;

a blanket cylinder at at least a first one of said flexographic printing stations;

flexographic ink-providing means at said at least first one of said flexographic printing stations for applying a flexographic ink to said blanket cylinder to form an image;

a substrate for receiving said flexographic ink image transferred from said blanket cylinder; and

at least one subsequent lithographic printing station in said in-line process for receiving said image printed substrate and printing an additional colored ink image on said substrate on top of said flexographic ink image using offset lithography.

16. Apparatus as in claim 15 further comprising:

a plate cylinder at said at least first one of said flexographic stations;

a flexographic plate on said plate cylinder for receiving and transferring said flexographic ink to said blanket cylinder; and

said flexographic ink-providing means including a flexographic ink supply and an anilox roller associated with said flexographic ink supply for transferring said flexographic ink to said flexographic plate.

17. Apparatus for a combined lithographic/flexographic printing process for printing a multicolored image comprising:

a plurality of successive printing stations for printing color on a substrate in a continuous in-line process, said printing stations including both lithographic and flexographic printing stations;

at least one of said flexographic printing stations having:

(1) a plate cylinder and a blanket cylinder, said plate cylinder including a flexographic plate having an

image thereon for transferring a flexographic color ink image to said blanket cylinder;

(2) an etched anilox roller for applying a flexographic color ink to said flexographic plate on said plate cylinder;

(3) an impression cylinder in ink-transfer relationship with said blanket cylinder for transferring said flexographic color ink image from said blanket cylinder to said substrate; and

at least one of said succeeding printing stations being a lithographic printing station using offset lithography for printing additional colored ink images on top of said flexographic ink image.

18. Apparatus as in claim 17 wherein said additional colored ink images are formed with lithographic inks.

19. Apparatus as in claim 17 wherein said colored ink images are formed with waterless inks.

20. Apparatus as in claim 17 further including an air dryer adjacent to said impression cylinder for drying the flexographic ink image transferred to said substrate before said additional colored ink images are printed thereon.

21. Apparatus as in claim 17 further including halftone printing plates for printing said colored ink images.

22. Apparatus as in claim 17 wherein said flexographic ink image and said colored ink images are printed as solid colors and/or with halftone printing plates in sequence and in registry in said successive printing stations to produce said multicolored image on said substrate.

23. Apparatus as in claim 17 wherein said printing apparatus includes a sheet-fed press.

DETAILED DESCRIPTION

24. Apparatus as in claim 17 wherein at least one of said flexographic printing stations prints said flexographic ink image with liquid vehicle slurry containing an encapsulated essence.

25. Apparatus as in claim 17 wherein at least one of said printing stations prints said flexographic ink image with a water-based liquid vehicle containing suspended particles.

26. Apparatus as in claim 25 wherein said suspended particles are uniform in size.

27. Apparatus as in claim 25 wherein said suspended particles are nonuniform in size.

28. Apparatus as in claim 25 wherein said suspended particles are metallic particles.

29. A method of combining lithography and flexographic printing in a continuous in-line process comprising the steps of:

providing a plurality of successive lithographic/flexographic printing stations for printing colored ink images on a substrate;

printing a flexographic ink image on said substrate at at least one of said flexographic stations;

transferring said printed substrate to at least one subsequent printing station in said continuous in-line process; and

printing colored ink images [on top of] over said flexographic ink image at at least one of said subsequent lithographic printing stations with an offset lithographic process.

30. A method as in claim 29 further comprising the step of drying said flexographic ink image on said substrate with an air dryer prior to printing said colored ink images thereon.

31. A method as in claim 29 further including the step of printing a coating on top of said colored ink images at one of said plurality of subsequent printing stations.

32. A method as in claim 29 wherein said colored inks forming said colored ink images are waterless.

33. A method as in claim 29 wherein said colored inks forming said colored ink images are in a solvent-based liquid vehicle.

34. A method as in claim 29 further including the steps of:

printing a slurry on said substrate at any of said printing stations in said continuous in-line process;

using an encapsulated essence in said slurry; and

printing an overcoating [over] on top of said slurry at a subsequent printing station in said in-line process to protect said essence.

35. A method as in claim 34 further including the step of printing an aqueous-based coating over said slurry.

36. A method as in claim 34 further including the step of printing an ultraviolet coating over said slurry.

37. A method of combining offset lithography and flexographic printing in a continuous in-line process comprising the steps of:

providing a substrate;

applying a flexographic ink to a blanket cylinder in a pattern with a coating head at a first flexographic printing station;

transferring said pattern of flexographic ink from said blanket cylinder to the substrate; and

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printing a waterless ink pattern over said flexographic ink pattern on said substrate at at least one subsequent offset lithographic printing station in said continuous in-line process.

38. A method of combining lithography and flexographic printing in a continuous in-line process comprising the steps of:

printing an aqueous-based vehicle image having suspended particles therein on a substrate at a first flexographic printing station;

transferring said image printed substrate to at least one additional printing station in said continuous in-line process; and

printing additional colored ink images on said printed substrate over said aqueous-based vehicle image in an offset lithographic process at said at least one additional printing station in said in-line process.

39. A method of combining lithography and flexographic printing in a continuous in-line process comprising the steps of:

(1) providing a plurality of successive printing stations for printing liquid vehicle images on a substrate in said in-line continuous process;

(2) utilizing an anilox roller to transfer a liquid ink as said liquid vehicle to a flexographic plate image at at least one of said printing stations;

(3) printing said liquid ink from said flexographic plate image to a substrate;

(4) transferring said printed substrate with said liquid ink image to a subsequent printing station in said in-line printing process;

(5) repeating steps (2)-(4) at subsequent printing stations in said in-line process to achieve a desired opacity ink image on said substrate; and

(6) printing an ink pattern over said flexographic ink image using an offset lithographic process.

40. A method as in claim 39 further including the step of additionally printing colored ink images over said liquid ink image on said substrate at subsequent ones of said printing stations in said in-line process.

41. A method as in claim 40 wherein said liquid ink is an opaque white color.

42. The apparatus of any of claims 1, 6, 10, 12, 15 and 17, wherein the substrate is printed on both sides in one pass during the continuous in-line process.

43. The method of any of claims 29, 37, 38 or 39 wherein the substrate is printed on both sides in one pass during the continuous in-line process.

44. Apparatus for a combined lithographic/flexographic printing process comprising:

a substrate;

a plurality of successive printing stations for depositing a series of thin, controlled layers on one side of a substrate in a continuous in-line process;

one of said stations comprising a flexographic printing station for printing a liquid vehicle image on said substrate using a flexographic process; and

at least one of said successive printing stations being a lithographic printing station;

whereby said substrate is printed on top of or on the opposite side of that previously printed at at least one of said successive lithographic printing stations using the lithographic process in said continuous in-line process.

45. Apparatus as in claim 44 wherein at least one of said thin, controlled layers at the flexographic station is a coating material.

46. Apparatus as in claim 44 wherein at least one of said thin, controlled layers at one of the lithographic stations is an ink.

47. Apparatus as in claim 44 wherein:

said substrate is a paper sheet; and

said apparatus includes a sheet feeder.

48. Apparatus as in claim 44 wherein:

said substrate is a web; and

said apparatus includes a web feeder.

49. The apparatus of claim 44 for a combined lithographic/flexographic printing process comprising:

a plurality of successive printing stations for depositing a series of thin, controlled layers on a substrate in a continuous in-line process;

one of said stations comprising a flexographic printing station printing an aqueous-based vehicle on one side of the substrate using the flexographic process to form a metallic coating image;

a suspended metallic material being included in said aqueous-based vehicle; and

at least one of the successive printing stations comprising an offset lithographic printing station printing a color image on top of the aqueous-based vehicle or on the opposite side to that previously printed using the offset lithographic process in said continuous in-line process.

50. Apparatus as in claim 49 wherein said suspended material includes uniform-sized metal particles to form said metallic coating.

51. Apparatus as in claim 49 wherein said suspended material includes nonuniform-sized metal particles to form said metallic coating.

52. Apparatus as in claim 49 further including:
said flexographic printing station including a plate cylinder
having a flexographic plate thereon, a blanket cylinder, and
an impression cylinder;

a flexographic plate image transferred from said
plate cylinder to said blanket cylinder, said image being
formed of said metallic coating, said blanket cylinder
transferring said metallic coating to said impression
cylinder for printing said flexographic plate image on said
substrate; and

an anilox roller associated with said flexographic
plate for supplying said aqueous-based vehicle containing
said suspended metallic material to said flexographic plate.

53. Apparatus for creating a combined
lithographic/flexographic printing process comprising:

a plurality of successive printing stations for
depositing a series of thin, controlled layers on a substrate
in a continuous in-line process;

one of said stations comprising a flexographic
printing station for printing a first color image using the
flexographic process; and

at least one of the other successive printing stations
comprising an offset lithographic printing station for
printing a second color image on the reverse side of the
substrate of the first color image using the offset
lithographic process in said continuous in-line process.

54. Apparatus as in claim 53 further including:

said flexographic printing station including a plate
cylinder, a blanket cylinder, and an impression cylinder;

a flexographic plate on said plate cylinder;

an anilox roller associated with said flexographic
plate for supplying a first color to said flexographic plate to
form said first color image; and

said blanket cylinder receiving said first color image from said plate cylinder and transferring said first color image to said impression cylinder for printing on said substrate.

55. Apparatus for creating a combined lithographic/flexographic printing process comprising:

a substrate:

a plurality of successive printing stations for
depositing a series of thin, controlled layers on a substrate
in a continuous in-line process;

at least one of said printing stations being flexographic stations and comprising:

(1) a supply of liquid coating;

(2) a plate cylinder associated with a blanket cylinder, said plate cylinder having a flexographic plate thereon;

(3) an anilox roller associated with said liquid supply coating and said plate cylinder for delivering said liquid coating to said flexographic plate to form an image for transfer to said blanket cylinder;

(4) an impression cylinder for receiving said liquid coating image transferred from said blanket cylinder and printing said image on one side of said substrate; and

at least one offset lithographic printing station for receiving said substrate and printing on top of or on the opposite side to that previously printed.

56. Apparatus as in claim 55 wherein said liquid coating image printed on said substrate is a white color ink.

57. Apparatus as in claim 56 further including an air dryer associated with each of said impression cylinders on said flexography stations, said air dryer having sufficient air velocity for drying said liquid coating before the substrate is transferred to the successive printing station in said continuous in-line process.

58. Apparatus for a combined lithographic/flexographic printing process comprising:

a plurality of successive printing stations for depositing a series of thin, controlled layers on a substrate in a continuous in-line process, said printing stations including both lithographic and at least two flexographic printing stations;

a blanket cylinder at at least a first one of said flexographic printing stations;

flexographic ink-providing means at the other of said flexographic printing stations for applying a flexographic ink to said blanket cylinder to form an image on one side of a substrate;

a substrate for receiving said flexographic ink image transferred from said blanket cylinder; and

at least one subsequent lithographic printing station in said in-line process for receiving said image printed substrate and printing an additional colored ink image on said substrate on top of said flexographic ink image or the opposite side to that previously printed using offset lithography.

59. Apparatus as in claim 58 further comprising:

a plate cylinder at said at least first one of said flexographic stations;

a flexographic plate on said plate cylinder for receiving and transferring said flexographic ink to said blanket cylinder; and

said flexographic ink-providing means including a flexographic ink supply and an anilox roller associated with said flexographic ink supply for transferring said flexographic ink to said flexographic plate.

60. Apparatus for a combined lithographic/flexographic printing process for printing a multicolored image comprising:

a plurality of successive printing stations for depositing a series of thin, controlled layers on a substrate in a continuous in-line process, said printing stations including both lithographic and flexographic printing stations;

at least one of said flexographic printing stations having:

(1) a plate cylinder and a blanket cylinder, said plate cylinder including a flexographic plate having an image thereon for transferring a flexographic color ink image to said blanket cylinder;

(2) an etched anilox roller for applying a flexographic color ink to said flexographic plate on said plate cylinder;

(3) an impression cylinder in ink-transfer relationship with said blanket cylinder for transferring said flexographic color ink image from said blanket cylinder to one side of said substrate; and

at least one of said succeeding printing stations being a lithographic printing station using offset lithography for printing additional colored ink images on top of said flexographic ink image or on the opposite side to that that previously printed.

61. Apparatus as in claim 60 wherein said additional colored ink images are formed with lithographic inks.

62. Apparatus as in claim 60 wherein said colored ink images are formed with waterless inks.

63. Apparatus as in claim 60 further including an air dryer adjacent to said impression cylinder for drying the flexographic ink image transferred to said substrate before said additional colored ink images are printed thereon.

64. Apparatus as in claim 60 further including halftone printing plates for printing said colored ink images.

65. Apparatus as in claim 60 wherein said flexographic ink image and said colored ink images are printed as solid colors and/or with halftone printing plates in sequence and in registry in said successive printing stations to produce said multicolored image on said substrate.

66. Apparatus as in claim 60 wherein said printing apparatus includes a sheet-fed press.

67. Apparatus as in claim 60 wherein at least one of said flexographic printing stations prints said flexographic ink image with liquid vehicle slurry containing an encapsulated essence.

68. Apparatus as in claim 60 wherein at least one of said printing stations prints said flexographic ink image with a water-based liquid vehicle containing suspended particles.

69. Apparatus as in claim 68 wherein said suspended particles are uniform in size.

70. Apparatus as in claim 68 wherein said suspended particles are nonuniform in size.

71. Apparatus as in claim 68 wherein said suspended particles are metallic particles.

72. A method of combining lithography and flexographic printing in a continuous in-line process comprising the steps of:

providing a plurality of successive lithographic/flexographic printing stations for depositing a series of thin, controlled layers on a substrate;

printing an image as one of said thin controlled layers on one side of said substrate at at least one of said flexographic stations;

transferring said printed substrate to at least one subsequent printing station in said continuous in-line process; and

printing an image on the reverse side of said substrate having said flexographic ink image, at at least one of said other subsequent lithographic printing stations with an offset lithographic process in the continuous in-line process.

73. A method as in claim 72 further comprising the step of drying said flexographic ink image on said substrate with an air dryer prior to printing said colored ink images thereon.

74. A method as in claim 72 further including the step of printing a coating on top of said colored ink images at one of said plurality of subsequent printing stations.

75. A method as in claim 72 wherein said colored inks forming said colored ink images are waterless.

76. A method as in claim 72 wherein said colored inks forming said colored ink images are in a solvent-based liquid vehicle.

77. A method as in claim 72 further including
the steps of:

printing a slurry on one side of said substrate at any of said printing stations in said continuous in-line process;

using an encapsulated essence in said slurry; and

printing an ink on the reverse side of said substrate
at a subsequent printing station in said in-line process.

78. A method as in claim 77 further including the step of printing an aqueous-based coating over said slurry.

79. A method as in claim 77 further including the step of printing an ultraviolet coating over said slurry.

80. A method of combining offset lithography and flexographic printing in a continuous in-line process comprising the steps of:

providing a substrate;

applying an ink or coating to a blanket cylinder in a pattern with a coating head at a flexographic printing station;

transferring said pattern of ink or coating from said blanket cylinder to one side of the substrate; and

printing a waterless ink pattern on the reverse side of said substrate at at least one subsequent offset lithographic printing station in said continuous in-line process.

81. A method of combining lithography and flexographic printing in a continuous in-line process comprising the steps of:

printing an aqueous-based vehicle having suspended particles therein on one side of a substrate at a flexographic printing station to form an image;

transferring said image printed substrate to at least one additional printing station in said continuous in-line process; and

printing additional images on the reverse side of said printed substrate in an offset lithographic process at said at least one additional printing station in said in-line process.

82. A method of combining lithography and flexographic printing in a continuous in-line process
comprising the steps of:

(1) providing a plurality of successive printing stations for depositing a series of thin, controlled layers on a substrate in said in-line continuous process;

(2) utilizing an anilox roller to transfer a liquid ink as one of said thin controlled layers to a flexographic plate image at at least one of said printing stations;

(3) printing said liquid ink from said
flexographic plate image to one side of a substrate;

(4) transferring said printed substrate with said liquid ink image to a subsequent printing station in said in-line printing process;

(5) repeating steps (2)-(4) at subsequent printing stations in said in-line process to achieve a desired opacity ink image on the one side of said substrate; and

(6) printing an ink pattern on the reverse side of said substrate using an offset lithographic process.

83. A method as in claim 82 further including the step of additionally printing ink images over said liquid ink image on said substrate at subsequent ones of said printing stations in said in-line process.

84. A method as in claim 83 wherein said liquid ink is an opaque white color.

85. A method of combining offset lithography and flexography using a plurality of successive printing stations in a continuous in-line process comprising:

(1) printing an image at one or more of said printing stations on a substrate using an offset lithographic process;

(2) transferring said image printed substrate to an additional printing station and printing at said additional printing station a coating on all or part of said image on said substrate;

(3) transferring said substrate to one or more additional printing stations for printing the reverse side of the said substrate; and

(4) printing an image on said reverse side of said substrate at one of such one or more printing stations using an offset lithographic process in the continuous in-line process.

86. Apparatus for a combined offset lithographic and flexographic printing process comprising:

(1) a substrate;

(2) a plurality of successive printing stations for depositing a series of thin layers of materials selected from a group consisting of lithographic and flexographic inks, coatings and slurries on one or both sides of a substrate in a continuous in-line process;

(3) at least one of said stations comprising a flexographic printing station for printing one of said flexographic materials on said substrate using a flexographic process;

(4) at least one of said successive printing stations being an offset lithographic printing station whereby said offset lithographic printing station is used to deposit one of said lithographic materials on either side of the said substrate in the continuous in-line process;

87. Apparatus for a combined offset lithographic/flexographic printing process comprising:

a plurality of successive printing stations for printing images on a substrate in a continuous in-line process, said printing stations including both offset lithographic and flexographic printing stations for depositing lithographic and flexographic inks, coatings and slurries on said substrate, whereby said lithographic and flexographic inks, coatings or slurries may be printed successively on one or both sides of said substrate in the continuous in-line process.

Supplemental Prince Exhibit C

Serial No. 09/315,796
Art Unit 2854

-6-

PROJECT 36251301

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 6, 9 - 20, 22 - 25, and 28 - 38 are rejected under 35 U.S.C. 102(e) as being anticipated by DeMoore et al. (US 5,960,713). DeMoore et al. is ultimately a CIP of S.N. 08/435,798 which has a filing date of 5/4/95. While this patent is a CIP of the earlier application, and could contain subject matter not disclosed in that application, reference can presently be made to EP 741,025 which claims direct priority from S.N. 08/435,798. All references to DeMoore et al. will be made to EP 741,025.

DeMoore et al. teach a first flexographic station (22, 110) for printing either colored inks, white ink, metallic particles, an encapsulated essence, or aqueous or UV coatings on a sheet or web (col. 2 lines 40-45, col. 3 lines 17-21, col. 4 lines 32-35, col. 9 line 47 - col. 10 line 18) and at least one successive lithographic station (24-28) for printing colored inks, aqueous, or UV coatings (col. 4 lines 32-50 and col. 10 lines 19-27). Applicant should carefully

review the entire document of DeMoore et al. With respect to the flexographic plate, plate cylinder, blanket cylinder, and anilox roller see column 10 lines 4 - 11. With respect to successive flexographic stations see column 6 lines 21 - 27. With respect to the air dryer see column 9 lines 1 - 10. With respect to the waterless inks see column 3 lines 21 - 30 and column 10 lines 19 - 27. With respect to claim 22 the plates would inherently be either solid or halftone.

Claims 7, 8, 21, 26, 27, and 39 - 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMoore et al. With respect to the size of the metallic particles it would have been obvious to one of ordinary skill in the art to use uniform sized particles to achieve a uniform, flat printed image or non-uniform sized particles to achieve a desired textured appearance. With respect to claim 21 it is widely conventional in the art to make halftone lithographic printing plates to achieve superior image appearance. With respect to claim 39 it would have been obvious to one of ordinary skill in the art to overprint the same image with the same color ink to simply achieve a denser or more opaque color. With respect to the added claims, insofar as they are adequately supported by the original disclosure, DeMoore et al. teach in column 3 lines 17 - 19 that the substrate may be printed on either side. It would have been obvious to one of ordinary skill in the art to selectively print on both sides of the substrate so as to achieve desirable perfecto printing.

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to comply with a provision which "is both reasonable and of material significance to the franchise relationship" pursuant to § 2802(b)(2)(A), which justified nonrenewal. Moreover, plaintiff's failure to maintain the premises in a clean manner is also a proper ground for nonrenewal under § 2802(b)(3)(C). Therefore, defendant can properly end the franchise relationship with the plaintiff.

claim benefit of one or more earlier filed applications, later application must, among other things, disclose same invention as has previously been disclosed in each prior application, and each application must comply with statute governing specification. 35 U.S.C.A. §§ 112, 120.

2. Patents \Leftrightarrow 90(1)

Claims of patent were not entitled to filing date of grandparent application, because they depend on entirely new matter added by subsequent continuation-in-part application, and because for purposes of statute governing specification, the prior application lacked an enabling disclosure and failed to set forth best mode. 35 U.S.C.A. §§ 112, 120.

3. Patents \Leftrightarrow 99

Mere reference to another application, patent or publication, is not an incorporation of anything therein into application containing such reference for purpose of disclosure required by patent statute governing specification. 35 U.S.C.A. § 112.

4. Patents \Leftrightarrow 76, 80

Plaintiff's sales of its trademarked agricultural insecticide suspended in xanthan gum, in accordance with claims of patent pertaining to an insecticidal composition, were made more than one year prior to filing date of patent application, and such public use and sales were not justified under "experimental use" doctrine, notwithstanding that sales were made under temporary Environmental Protection Agency experimental use permit; therefore, those sales constituted an absolute statutory bar to patentability under statute providing that no patent will be granted where invention was in public use or on sale one year prior to date of application for patent. 35 U.S.C.A. § 102(b).

5. Patents \Leftrightarrow 80

Patent No. 4,196,292, pertaining to an insecticidal composition consisting essentially of a polymer-encapsulated insecticide suspended in an aqueous dispersion of xanthan gum, was invalid under statutory subsection providing that a person shall be

PENNWALT CORPORATION, Plaintiff,

v.

AKZONA INC. and Armak
Co., Defendants.

Civ. A. No. 79-157.

United States District Court,
D. Delaware.

Aug. 22, 1983.

Plaintiff brought declaratory judgment action to declare invalid and unenforceable patent it had already infringed. The District Court, Latchum, Chief Judge, held that: (1) patent was invalid as "in public use"; (2) parties' product development agreement afforded no basis for holding plaintiff liable for damages for breach of contract; (3) plaintiff was not liable to defendant for breach of contract implied from unauthorized use of its trade secret or unauthorized use of its trade secret unjustly enriching plaintiff; and (4) plaintiff was not entitled to attorney fees under statute providing for such fees in "exceptional case."

Ordered accordingly.

1. Patents \Leftrightarrow 90(1)

To come within purview of statute allowing later-filed patent application to



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entitled to a patent unless, *inter alia*, invention was in public use or on sale in United States more than one year prior to date of application for patent. 35 U.S.C.A. § 102(b).

6. Patents \Leftrightarrow 80

Single unrestricted public use or sale brings into operation bar to patentability set forth in statute providing that no patent will be granted where invention was in public use or on sale in United States more than one year prior to date of patent application. 35 U.S.C.A. § 102(b).

7. Patents \Leftrightarrow 75, 76

Bar to patentability set forth in statute providing that a person shall be entitled to a patent unless, *inter alia*, invention was in public use or on sale in United States more than one year prior to date of application for patent does not require invention to be placed in public use or on sale by patentee because such use or sale by third party, with or without consent of inventor, is sufficient to invalidate any patent subsequently obtained if use or sale occurred more than one year prior to issue. 35 U.S.C.A. § 102(b).

8. Patents \Leftrightarrow 75, 76

"Experimental use" doctrine, developed under patent law, which is an exception to bar to patentability set forth in statute providing that no patent will issue where invention was in public use or on sale in United States more than one year prior to date of patent application, is not coextensive with and does not have same meaning as "experimental use" of pesticides conducted under an Environmental Protection Agency temporary permit issued under environmental protection laws. 35 U.S.C.A. § 102(b).

9. Patents \Leftrightarrow 75, 76

Bar to patentability in statute providing that a person shall be entitled to patent unless invention was in public use or on sale in United States more than one year prior to date of application for patent, can be extended for reasonable period if experimentation is undertaken to demonstrate utility of claimed invention and its lack of

need for further improvement. 35 U.S.C.A. § 102(b).

10. Patents \Leftrightarrow 75, 76

For purposes of bar to patentability in statute providing that no patent will be granted where invention was in public use or on sale in United States more than one year prior to date of application for patent, and exception to that bar for "experimental use," use or sale labeled "experimental" by government regulatory agency is not necessarily "experimental" under patent laws. 35 U.S.C.A. § 102(b).

11. Patents \Leftrightarrow 75

Experimentation to perfect nonclaimed features of an invention does not fall within experimental-use exception to bar to patentability in statute providing that a person shall be entitled to a patent unless, *inter alia*, invention was in public use or on sale in United States more than one year prior to date of application for patent. 35 U.S.C.A. § 102(b).

12. Patents \Leftrightarrow 81

For purposes of experimental-use exception to bar to patentability set forth in statute providing that no patent will issue where invention was in public use or on sale in United States more than one year prior to date of application for patent, absence of any restriction by patentee on uses of patented invention is indicative of nonexperimental purpose. 35 U.S.C.A. § 102(b).

13. Patents \Leftrightarrow 81

To avoid bar to patentability set forth in statute providing that a person shall be entitled to a patent unless invention was in public use or on sale in United States more than one year prior to date of patent application, inventor must show that transferee lacked authority to use invention or exploit its commercial value, but where an inventor sells or delivers invention to another without any enforceable obligation for other to hold invention for experimental purposes only, unrestricted sale or delivery will invalidate the patent. 35 U.S.C.A. § 102(b).

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14. Patents \Leftrightarrow 81

For purposes of experimental-use exception to bar to patentability in statute providing that no patent will be granted where invention was in public use or on sale in United States more than one year prior to date of application for patent, a factor that is indicative of nonexperimental purpose is failure to require test reports. 35 U.S.C.A. § 102(b).

15. Patents \Leftrightarrow 75, 76

Where person has authority to use invention commercially or sell to others without any duty to experiment further, there is a "sale" within meaning of statute providing that person shall be entitled to patent unless invention was in public use or on sale in United States more than one year prior to date of application for patent, and experimental-use exception does not apply. 35 U.S.C.A. § 102(b).

16. Patents \Leftrightarrow 75

Market testing and product introduction are not "experimental uses" for purposes of experimental-use exception to bar to patentability set forth in statute providing that a person shall be entitled to a patent unless invention was in public use or on sale in United States more than one year prior to date of application for patent. 35 U.S.C.A. § 102(b).

17. Patents \Leftrightarrow 75, 76

Experimental-use exception to bar to patentability in statute providing that no patent will issue where invention was in public use or on sale in United States more than one year prior to date of application for patent, applies to experiments of inventor or persons under his control, not to third parties. 35 U.S.C.A. § 102(b).

18. Contracts \Leftrightarrow 170(1)

Faced with contradictory testimony, courts turn, as an important aid to construction of contract, to examine practical construction placed on agreement by parties themselves.

19. Contracts \Leftrightarrow 201

Xanthan gum was not within scope of parties' product development agreement,

and therefore defendant's submission of that material to plaintiff for use as a suspending agent was not pursuant to that agreement so as to obligate plaintiff to enter into licensee agreement and pay royalties thereunder.

20. Implied and Constructive Contracts \Leftrightarrow 3

Plaintiff, which used defendant's product as a suspending agent in its insecticide, was not liable to defendant for breach of contract implied from unauthorized use of defendant's trade secret or unauthorized use of defendant's trade secret unjustly enriching plaintiff, because when defendant first requested plaintiff's help in solving problem with insecticide, it was seeking free technical or customer service, when defendant shipped samples it never indicated that compensation was expected, and defendant did not indicate that responding to plaintiff's request for customer service, defendant was intending to establish a confidential relationship.

21. Patents \Leftrightarrow 325.11(3)

There were genuine issues of material fact in dispute over validity of patent which could not be resolved by summary judgment; therefore, bad faith could not be attributed to defendant for opposing plaintiff's summary judgment motion so as to make case "exceptional" and entitle plaintiff to attorney fees under statute. 35 U.S.C.A. § 285.

22. Patents \Leftrightarrow 325.11(3)

Where patent was found to be invalid under "in public use" and "on sale" statutory bar, and court intentionally refrained from passing on all of plaintiff's claims that patent was unenforceable on ground that fraud was practiced in Patent Office, plaintiff was not entitled to attorney fees on basis that patentee intentionally practiced fraud upon Patent Office so as to make case "exceptional" within meaning of statute providing for fees. 35 U.S.C.A. § 285.

mington, Del., Arthur H. Seidel and Daniel A. Monaco of Seidel, Gonda & Goldhammer, P.C., Philadelphia, Pa., of counsel, for plaintiff.

John G. Mulford of Theisen, Lank, Mulford and Goldberg, P.A., Wilmington, Del., and Phillip M. Mayer of Leydig, Voit, Ossann, Mayer & Holt, Ltd., Chicago, Ill., for defendants.

OPINION

LATCHUM, Chief Judge.

Pennwalt Corporation ("Pennwalt") commenced this patent suit on March 26, 1979 in which it seeks a declaratory judgment of invalidity and unenforceability of U.S. Patent No. 4,196,292 ("the '292" or "Nemeth patent") entitled "Stable Water Dispersions of Encapsulated Parathion," issued August 15, 1978 to Harold C. Nemeth. (Docket Item ["D.I."] 1.) The named defendants are Akzona, Inc. ("Akzona"), and its subsidiary Armak Co. ("Armak"). (*Id.*) The '292 patent is assigned to Akzona but the parties have agreed that Armak should be treated as the patent owner for purposes of this litigation. (D.I. 99, ¶ 1.) Armak has counterclaimed, charging that Pennwalt's agricultural insecticide trademarked "Penncap M"¹ infringes the '292 patent and in addition seeks substantial damages from Pennwalt for Penncap M sales over a six year period before the '292 patent issued based on three alternative theories: (a) breach of the 1963 Product Development Agreement ("PDA") entered into between the parties, (b) breach of implied contract to pay for the use of a trade secret, and (c) unjust enrichment for using confidential information. (D.I. 29.) Pennwalt does not contest infringement of the '292 patent (D.I. 99, ¶ 29), but has raised the defenses of the statute of limitations, laches, waiver and estoppel to Armak's counterclaim for breach of contract, breach of implied contract, and unjust enrichment. (D.I. 100 & 102.) The opposing parties seek attorneys' fees under 35 U.S.C. § 285. (D.I. 99, ¶ 1.)

1. Pennwalt's agricultural insecticides are trademarked as "Penncap M," "Penncap E," and "Knox-out," but the parties agree that "Penn-

The liability phase of this case was tried to the Court without a jury for nine days between February 18 and February 25, 1983. The parties have completed their post-trial briefing (D.I. 128, 129 & 130) and the case is ready for a decision on the liability issues.

Pennwalt specifically contends that the '292 patent is invalid for any one of the following reasons: (1) under 35 U.S.C. § 103 because the subject matter claimed in the '292 patent was obvious; (2) under 35 U.S.C. § 102(g) because the patented Nemeth invention was made in this country before Nemeth by a Pennwalt employee, Chester B. DeSavigny, who had not abandoned, suppressed or concealed it; (3) under 35 U.S.C. § 102(b) because the '292 invention was publicly used and on sale more than one year prior to the filing of the continuation-in-part Serial No. 457,152 ("the '152 application") on April 1, 1974, the first application complying with the requirements of 35 U.S.C. § 112, and because Nemeth is not entitled to the March 1, 1972 filing date of application Serial No. 230,935 ("the '935 application") under 35 U.S.C. § 120 in that the '935 application failed to set forth the "best mode" known to Nemeth and lacked an enabling disclosure as required by 35 U.S.C. § 112.

Finally, Pennwalt argues that the patent is unenforceable because it was procured by fraud upon the Patent Office in that: (1) Nemeth and Armak failed to advise the Patent Office that Pennwalt was making the claimed invention and selling it for more than a year before the filing date of the '152 application; (2) Nemeth falsely represented in the '935 application that he had conducted field tests prior to March 1, 1972; (3) Nemeth deliberately misidentified General Mills' experimental gums "X-383S" and "XG-458S" to the Patent Office as xanthan gum in the '935 application; (4) Nemeth concealed the fact that tragacanth gum "worked" in the '935 application; (5)

cap M" should be considered as representative of all of Pennwalt's alleged infringing products. (D.I. 99, ¶ 1.)

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Nemeth misrepresented that his invention was the result of a "long search" in the '152 application; and (6) Table IV of the '292 patent is the result of concealment and commingling of laboratory data and procedures.

I. VALIDITY

1. Earliest Filing Date

The '292 patent pertains to an insecticidal composition consisting essentially of a polymer-encapsulated insecticide suspended in an aqueous dispersion of xanthan gum (D.I. 99, ¶ 3.5). On its face, the '292 patent claims the benefit of the March 1, 1972 filing date of the '935 original grandparent application. (TX 201.)² Pennwalt contends that the '292 patent is not entitled to the March 1, 1972 filing date and the Court agrees.

[1] 35 U.S.C. § 120 allows a later-filed application, under specified circumstances, to claim the benefit of one or more earlier filed applications. It is well established that to come within the purview of § 120, (1) a later application must, among other things, disclose the same invention as has previously been disclosed in each prior application, and (2) each application must comply with 35 U.S.C. § 112. 35 U.S.C. § 120; see, e.g., *Acme Highway Products Corp. v. D.S. Brown Co.*, 431 F.2d 1074, 1078 (6th Cir. 1970), cert. denied, 401 U.S. 956, 94 S.Ct. 125, 38 L.Ed.2d 57 (1971); *Bendix Corp. v. Balax, Inc.*, 421 F.2d 809, 816-17 (7th Cir.), cert. denied, 399 U.S. 911, 90 S.Ct. 2203, 26 L.Ed.2d 562 (1970), reh. denied, 414 U.S. 819, 94 S.Ct. 43, 38 L.Ed.2d 51 (1973); *Chromalloy American Corp. v. Alloy Surfaces Co.*, 339 F.Supp. 859, 874 (D.Del. 1972).

[2] In the present case, the claims of the '292 patent are not entitled to the filing date of the grandparent application '935 of March 1, 1972, because they depend on entirely new matter added by the continuation-in-part ("C.I.P.") application '152 filed on April 1, 1974.

2. TX refers to Armak's trial exhibits and PX refers to Pennwalt's trial exhibits; Tr. refers to

Claim 1, the broadest claim of the '292 patent, recites the following insecticidal composition (TX 201, Col. 14, line 52):

1. An insecticidal composition consisting essentially of an aqueous dispersion of:

(a) from about 1% to about 40% by weight of said composition of capsules of a member of the group consisting of a phosphoromonothioate and a phosphordithioate insecticide encapsulated in a skin selected from the group consisting of a polyamide, a polyurea, and a mixed polyamide-polyurea cross-linked with a cross-linking agent selected from the group consisting of a polyalkylene polyamine and a polyfunctional isocyanate;

(b) from about 0.1% to about 0.5% by weight of said composition of a xanthan gum dispersant for said capsules; and

(c) balance water.

Succinctly stated, three distinct types of polymer encapsulated insecticides are claimed: polyamide capsule; polyurea capsule; and cross-linked polyamide-polyurea capsule.

However, the '935 application discloses only xanthan gum dispersions of polyamide-encapsulated insecticides (PX 900 "O"). Nowhere in the '935 file wrapper is there any reference of polyurea-encapsulated insecticides, nor is there mention of cross-linked polyamide-polyurea encapsulated insecticides (PX 900 "O"; Tr. 1466-73). Nowhere in the '935 application is there any teaching that isocyanates could be used to produce polyureas or polyamide-polyurea copolymers (PX 900 "O"; Tr. 1467). The sole teaching of the '935 application is directed to polyamide microcapsule suspensions (PX 2, pp. 4-6, 8).

The only specific polyamide taught in the '935 application is the reaction product of adipoyl chloride and lysine in the "Background of the Invention" (PX 2, p. 5). This reaction produces a linear, non-crossed-linked polyamide (Tr. 903).

Claim 1 of the '292 patent defines encapsulating polymers in a Markush group (TX 201, col. 14, line 57):

[E]ncapsulated in a skin selected from a group consisting of a polyamide, a polyurea, and a mixed polyamide-polyurea cross-linked

The members of a Markush group are exclusive with respect to each other (Tr. 1470). The Manual of Patenting Examining Procedure ("MPEP") states that a Markush "type of claim is employed where there is no commonly accepted generic expression which is commensurate in scope with the field which the applicant desires to cover" (PX 1002), and this rule has been part of MPEP since at least 1964 (Tr. 1472). Nemeth, having included polyamide and polyamide-polyurea copolymers in a Markush group in the '292 claim, is now estopped from asserting in this litigation, that "polyamide" used in the '935 application is generic for cross-linked polyamide-polyurea. Indeed, there is no teaching in the '935 application that "polyamide" is used other than in its ordinary meaning to an organic chemist, which would be a plastic with long linear molecules. (Tr. 1467.)

Furthermore, there is no presumption of entitlement to the '935 filing date by the issuance of the '292 patent. The effective date of the C.I.P. claims (and the claims of the '292 patent) was never decided by the Patent Examiner. Under the MPEP, patent examiners do not ordinarily make such determinations, except in the case of "intervening art" or in case of an interference (PX 1001):

Unless the filing date of the earlier application is actually needed, for example, in the case of an interference or to overcome a reference, there is no need to make a determination as to whether the requirement of 35 U.S.C. 120, that the earlier application disclose the invention of the second application in the manner provided by the first paragraph of 35 U.S.C. 112, is met and whether a substantial portion or all of the earlier applica-

tion is repeated in the second application in a continuation-in-part situation.

MPEP § 201.08 (1982 rev.)

While the above provision was added to the MPEP after the filing date of C.I.P. '152 application, it represents a codification of pre-existing Patent Office Practice (Tr. 1459). Thus the Examiner of the '292 patent never determined the effective filing date of the claims in that patent. The new matter added by the C.I.P. on April 1, 1974 which was not disclosed in the earlier '935 application is not entitled under 35 U.S.C. § 120 to filing date of the earlier '935 application for non-disclosed matter. Such non-disclosed matter is entitled to the filing date of the C.I.P. filed on April 1, 1974. *In re Lukach*, 442 F.2d 967, 969, 58 CCPA 1302 (1971); *In re Russetta and Jenny*, 255 F.2d 687, 690-91, 45 CCPA 968 (1958); *In re Steenbock*, 83 F.2d 912, 913 (Cust. & Pat.App.1936).

Secondly, as mentioned earlier, in order to obtain the benefit of the filing date of a co-pending patent application, the claims of a C.I.P. application, in accordance with 35 U.S.C. § 120, must comply with the "enabling" and "best mode" disclosure requirements of the first paragraph of 35 U.S.C. § 112.

The '935 application was finally rejected by the Patent Examiner because it lacked an enabling disclosure and failed to set forth the best mode (PX 2, pp. 35-38). The basis for both rejections was substantially the same, that is, the '935 application described the encapsulating material only as a "polyamide" without identifying a specific polyamide or a method of preparation. (*Id.*).

"Polyamide" encompasses a virtually unlimited variety of diverse chemical compounds (Tr. 314; 528; 905; 1123). Armak argues that "polyamide" is not so vast and that one skilled in the art would ignore the limitless linear polyamides which do not work and focus only on narrow subgenus polyamide types possessing the requisite time-release qualities necessary for use as insecticide microcapsules, in other words,

Cite as 570 F.Supp. 1097 (1983)

the cross-linked polyamide-polyurea copolymers (D.I. 128, pp. 80-83).

However, as above mentioned, the only specific polyamide that appears in the '935 application is under the "Background of the Invention" and not under "detail Description of the Invention" or under "Examples," the usual place where one skilled in the art would expect to find an enabling disclosure of the claimed invention (PX 2, p. 5). But as discussed above, the adipoyl chloride-lysine reaction referred to therein produces a linear non-cross-linked polyamide, lacking time release characteristics (Tr. 902-904). The capsule releases its contents by degradation not by diffusion (Tr. 1186). The capsule so formed is especially susceptible to degradation induced by interaction with negatively charged chemicals, is thin-walled and fragile and will rupture during passage through spraying equipment (Tr. 1180-81; 1034).

The Patent Examiner expressly held that the teaching of adipoyl chloride-lysine capsules in the "Background of the Invention" did not sufficiently characterize the capsules and could not be considered a specific "polyamide" as required by the best mode requirements of § 112 (PX 2, p. 26). Nemeth argued in reply that the disclosure of "polyamide" in the '935 application coupled with the three Pennwalt U.S. Patents and one Pennwalt British Patent³ referred to in the "Background" constituted both an enabling and best mode disclosure (PX 2, pp. 30-31). The Patent Examiner disagreed and expressly ruled that the four Pennwalt patents were not incorporated by reference (PX 2, pp. 36-38). No appeal was taken by Nemeth.

Armak relies on one of the four Pennwalt patents, cited in the '935 application [the British Vandegaer patent, 1,091,141 (PX 603)] to supply an enabling disclosure. However, the Patent Examiner specifically ruled that this British patent was not incorporated by reference in the '935 application because MPEP 608.01(p) provides that "es-

sential material may not be incorporated by reference to foreign patents" (PX 2, p. 36). To allow Armak now in this litigation to claim that the four Pennwalt patents add an enabling disclosure to the '935 application would render the MPEP a nullity.

[3] The Patent Examiner further ruled that the British Vandegaer '141 and the other three Pennwalt patents were not part of the '935 disclosure because they were not included with the requisite specificity. A mere reference to another application, patent or publication, is not an incorporation of anything therein into the application containing such reference for the purpose of the disclosure required by 35 U.S.C. § 112. *In re Seversky*, 474 F.2d 671, 674 (Cust. & Pat.App.1973).

Even assuming that the four Pennwalt patents were properly incorporated in the '935 application, it is still non-enabling because one skilled in the art could not make and use the invention without undue experimentation. The Pennwalt microencapsulation patents (PX 600-603) teach a wide range of encapsulating polymers. British Vandegaer '141, in particular, teaches an infinite variety of polymers (Tr. 1126-27). The '935 application contains no teaching leading one skilled in the art through this range of polymers to the cross-linked polyamide and polyurea copolymers which support the claims of the '292 patent. One skilled in the art would be directed to "polyamide" capsules, specifically the ingestible capsule of Santo '776 (PX 602) which is wholly unsuitable as a time-release insecticide microcapsule.

The Court also finds that *In re Herschler*, 591 F.2d 693 (Cust. & Pat.App.1979), upon which Armak relies, is not applicable to this case because the written description in the '935 application which discloses the sole encapsulating material as "polyamide," (which does not work) furnishes absolutely no guide to predicting polymers which may be used to encapsulate insecticides. Thus the Court finds that the claims of the '292

3. Pennwalt's U.S. Patents referred to in the '935 application were Nos. 3,464,926 (PX 600); 3,492,380 (PX 601); and 3,607,776 (PX

602) and Pennwalt's British Patent No. 1,091-141 (PX 603).

patent are not supported by the disclosures in the '935 application and they are not entitled to the '935 filing date of March 1, 1972. *In re Smith*, 458 F.2d 1389, 1394, 59 CCPA 1025 (1972); *In re Lukach*, 442 F.2d 967, 969, 58 CCPA 1233 (1971); *In re Ahlbrecht*, 435 F.2d 908, 910-11, 58 CCPA 848 (1971).

Finally, the '935 application did not disclose the best mode as required by § 112. The only mode known to Nemeth prior to March 1, 1972 was a xanthan gum suspension of Penncap M's microcapsules. Nemeth's original suspension tests were conducted in April, 1971 when he used xanthan gum, trademarked as Kelzan by Kelco Co., to suspend "Penncap M" capsules (Tr. 100-106). By August, 1971, Nemeth knew that the Pennwalt material that he was working with was Pennwalt's encapsulated methyl parathion commercially identified as "Penncap M" (Tr. 83; TX 129 at Bates A07068). Also prior to filing the '935 application, Armak's patent attorney who prosecuted the '935 application knew that Pennwalt's microencapsulated insecticide carried the trademark "Penncap M" (Tr. 537; PX 18). However, Armak chose not to identify this material by Pennwalt's trademark. This was not done until the later-filed '152 C.I.P. Thus, the best mode and only mode known to Nemeth was not disclosed in the '935 application as required by § 112.

Accordingly, the Court finds that the claims of the '292 patent are not entitled to the March 1, 1972 filing date of the '935 application but can only be accorded the filing date of the C.I.P. '152 application on April 1, 1974. This finding should not come as a surprise to Armak. Sidney Shapiro, who was Nemeth's supervisor in 1971 and who followed the patent proceedings (Tr. 229), believed in early 1974 that Armak was not entitled to the 1972 filing date of the '935 application. Shapiro wrote in a memorandum, dated January 24, 1974:

2. "Serial No. 230,935 by Harold Nemeth filed March 1, 1972"

4. The material Armak furnished to Pennwalt under its designation "RD-4237" was an industrial grade xanthan gum which Armak purchased from Kelco Co., under the latter's trade-

This filing date has been lost and we will have to refile. We are shooting for a mid-February new filing date. We cannot file earlier until we obtain a definition of the nature of the capsules given in examples in the Pennwalt patent. [Emphasis added].

(PX 38; *see also* Tr. 349.)

Furthermore, this also appears to have been the belief of Jack Hall, Armak's attorney, who prosecuted the '935 application and filed the C.I.P. '152 application (Tr. 601-603).

2. *In Public Use and On Sale Issue*

The Court having determined that the claims of the '292 patent can only be accorded the April 1, 1974 filing date of the C.I.P. '152 application (the first application complying with the requirements of § 112), the Court must next decide whether the patented invention was in public use or on sale in this country more than one year prior to April 1, 1974 as Pennwalt contends.

The evidence is undisputed that between July 18 and August 7, 1972, Pennwalt manufactured at its plant in Bryan, Texas, six batches of approximately 4,300 gals. of Penncap M suspended in xanthan gum acquired from Armak and designated by Armak as "RD-4237" (PX 508; Tr. 922-23).⁴ Prior to packaging the Penncap M into 5-gallon containers, by Pennwalt, a sample of each batch was removed for three-part quality control testing: (1) chemical assay, (2) toxicology, and (3) cricket bioassay, and each of the six batches of Penncap M produced in 1972 with RD-4237 passed all three tests and were released for sale (Tr. 931-33; 735-47; PX 504 and 544).

Armak sent several samples of RD-4237 to Pennwalt in 1971 and an additional pound was sent February 18, 1972. A 20-pound shipment was received by Pennwalt before the July 18, 1972 first batch was run. In response to Pennwalt's request, 100

mark "Kelzan," but Armak removed the Kelzan labels before shipping the xanthan gum to Pennwalt (Tr. 70, 97-100; 253-54).

pounds of RD-4237 free of charge was shipped on July 21, 1972 and finally a 300-pound shipment of RD-4237 was sent in August, 1972, and represented Pennwalt's first purchase of RD-4237 from Armak. (D.I. 99, ¶¶ 3.24 & 26.) Nemeth, who supervised the shipments, was aware that the xanthan gum would be used by Pennwalt at 0.1-0.5 weight per cent to suspend Penncap M (TX 178 at Bates A005351, Tr. 123).

Despite a diligent search,⁵ only six Pennwalt sales invoices have been found which showed that 1,220 gallons of Penncap M dispersed in xanthan gum were sold from the six batches made in 1972 (PX 509; Tr. 944-53). These invoices reflect the following sales: (1) Pennwalt on August 22, 1972 sold 400 gallons from the August 2, 1972 batch to Helena Chemical Company for \$900 (PX 509 at Bates 04282-284; Tr. 948, 827); (2) Pennwalt on four different occasions between August 24 and September 19, 1972 sold 1,015 gallons to Smith-Douglas of Norfolk, Va., the distribution branch of Borden Company, for \$4,567.50 (PX 509 at Bates 04283-85, 04287, 04288); and (3) on August 29, 1972 Pennwalt sold a 5-gallon can to Stauffer Chemical Company in Houston, Texas for \$22.50 (PX 432D; Tr. 1205).

These sales of Penncap M, except for the Stauffer sale, were made directly to distributors who sold to farmer users (Tr. 827). Stauffer purchased Penncap M solely for its own purpose of evaluating a competitor's product (Tr. 1191-92). The \$4.50 per gallon distributor price reflected on the invoices was set at that price to allow normal distributor and retail margins (Tr. 1429).

[4-7] These sales of 1,220 gallons of Penncap M suspended in xanthan gum in accordance with the claims of the '292 patent, were all made prior to April 1, 1973 and

5. While sales invoices were generated by Pennwalt at Tacoma, Washington; Montgomery, Alabama; Oakbrook, Illinois; and Bryan, Texas, all sales records for 1972 were destroyed except for the records found at Bryan, Texas (Tr. 944-45, 953).

6. The "temporary permit" regulations revised as of January 1, 1972 were issued under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"), 7 U.S.C. § 135.

without question constitute an absolute statutory bar under 35 U.S.C. § 102(b) rendering the '292 patent invalid. This is so because a single unrestricted public use or sale brings into operation this bar to patentability. *Consolidated Fruit Jar v. Wright*, 94 U.S. 92, 94, 24 L.Ed. 68 (1876); *General Electric Co. v. United States*, 228 Ct.Cl. 192, 654 F.2d 55, 59 (1981); *In re Theis*, 610 F.2d 786, 791 (Cust. & Pat.App. 1979). Furthermore, the § 102(b) bar does not require the invention to be placed in public use or on sale by the patentee because such use or sale by a third party, with or without the consent of the inventor, is sufficient to invalidate any patent subsequently obtained if the use or sale occurred more than a year prior to issue. *Andrews v. Hovey*, 124 U.S. 694, 719, 8 S.Ct. 676, 686, 31 L.Ed. 557 (1888); *Hobbs v. United States*, 451 F.2d 849, 859-60 (5th Cir.1971); *O'Brien v. Westinghouse Elec. Co.*, 293 F.2d 1, 10 (3d Cir.1961); *Lorenz v. Colgate-Palmolive-Peet Co.*, 167 F.2d 423, 429 (3d Cir. 1948); *Noma Lites Canada Ltd. v. Westinghouse Elec. Corp.*, 399 F.Supp. 243, 253 (D.D.C.1975).

Indeed, Armak does not contest the factual or the legal basis of the public use and sale of the patented invention in 1972 as recited above. Rather, Armak contends that the public use and sales prior to the critical date of April 1, 1973, were completely justified under the "experimental use" doctrine first recognized by the Supreme Court in *City of Elizabeth v. American Nicholson Pavement Co.*, 97 U.S. 126, 24 L.Ed. 1000 (1878). Armak argues that the 1972 public uses and sales were made under a "temporary permit" issued under Environmental Protective Agency ("EPA") regulations⁶ which provided that such tempo-

FIFRA as originally enacted in 1947 required that all pesticides shipped in interstate commerce be registered with the Secretary of the United States Department of Agriculture ("USDA"). In addition, the Food and Drug Administration ("FDA") set tolerances for those pesticides that might leave a residue on food crops. Authority over the regulation of pesticides under FIFRA was transferred from the USDA and the FDA to the EPA on December 2, 1970, by Reorganization Plan No. 3 of

rary permits "will be issued only for bona-fide experimental programs under the supervision of qualified persons" (TX 185; 40 C.F.R. § 162.17 revised as of 1/1/72). Thus, Armak contends that since the 1972 public uses and sales of Penncap M were made by Pennwalt under an EPA experimental use permit, then *ipso facto* these public uses and sales fall within the experimental use doctrine under the patent laws and are exceptions to the statutory bar of 35 U.S.C. § 102(b). The Court disagrees.

[8] The "experimental use" doctrine, developed under U.S. patent law as an exception to the statutory bar of § 102(b), is not co-extensive with, and does not have the same meaning as, "experimental use" of pesticides conducted under an EPA temporary permit issued under our environmental protection laws. Experimentation under U.S. patent law is based upon policy grounds and for purposes wholly unrelated to, and different from, the underlying policy reasons and purposes for experimentation under federal environmental legislation. Under the facts of this case, neither the public use nor sale of the patented invention before the critical date can be considered "experimental use" under § 102(b) even though the use and sales made in 1972 were permitted by an EPA temporary permit issued for "experimental use."

The pesticide control legislation, represented by FIFRA and FIFRA-1972, was the result of congressional recognition that appropriate pesticides properly used are beneficial to man and his environment and also that many pesticides constitute poisons too dangerous for any use, that some are dangerous to the health of man, animals, bees and other useful insects unless used extremely carefully. Thus, realizing that

1970, 35 Fed.Reg. 15623 (1970). On October 21, 1972, FIFRA was extensively amended by the Federal Environmental Pesticide Control Act, Pub.L. 92-516 ("FIFRA-1972"). FIFRA-1972 expanded the original FIFRA to cover pesticides in intrastate commerce and provided for the registration with the EPA of all pesticides to be distributed, sold or shipped, upon a showing that the pesticide warrants the claims

pesticides have important environmental effects, both beneficial and deleterious, the statutory scheme was adopted to vest wise regulatory control upon all pesticides based on a careful balancing of benefit versus risk to man and his environment. Hence, at that time these regulatory acts required all pesticides, with certain exceptions, to be registered with the EPA before they could be generally distributed, sold, shipped, delivered or received by anyone. The EPA was to approve the registration of a pesticide if it were determined that (1) the pesticide warrants the claims made for it, (2) its label complies with legislation, and (3) it will not have unreasonable adverse effects on the environment. The applicant had the burden of proving these elements by test data and other relevant information. See 7 U.S.C. § 135 (now repealed); Pub.L. No. 92-516; Legislative History of Pesticide Control, 3 U.S.Code Cong. & Ad.News, 92d Cong., 2d Sess. (1972) at 3993-4134. In addition, the EPA was given the authority to issue temporary permits (TX 185; 40 C.F.R. § 162.17 regulations as of 1/1/72) or "experimental use permits" (7 U.S.C. § 136a), to an applicant to gather information necessary to convince the EPA to register the pesticide for general use. Thus, this pesticide regulatory legislation prohibited the sale or shipment of all unregistered pesticides, whether patented or unpatented, unless they were transferred under a temporary EPA permit. The focus of these laws and regulations was to protect the environment and had nothing to do with experimentation for patent purposes.

On the other hand, the experimental use doctrine in patent law has been explained in *Paeco, Inc. v. Applied Moldings, Inc.*, 562 F.2d 870 (3d Cir.1977), as follows:

That doctrine allows an inventor a reasonable period of experimentation where-

made for it, its labeling complies with the Act, and it will not have unreasonable adverse effects upon the environment. In addition, the FIFRA-1972 provided that the EPA could issue "experimental use permits," if needed by an applicant to gather information in order to register the pesticide. (Pub.L. No. 92-516, Sections 3 & 5.)

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in he may perfect his ideas, provided that the inventor truly has utilized the public use and sale to that laudable end, not as a competitive tool to exploit his invention and gain an advantage over others.

562 F.2d at 874.

[9] This means that the public use and on sale bar of § 102(b) can be extended for a reasonable period if the experimentation is undertaken to demonstrate the utility of the claimed invention and its lack of need for further improvement. *DeLong Corp. v. Raymond International, Inc.*, 622 F.2d 1135, 1144 (3d Cir.1980). The claims of the '292 patent in suit pertain to an insecticidal-concentrate composition. Pennwalt's activity under the EPA temporary permit was in no way necessary to demonstrate the composition's "utility and its lack of need for further refinement." The utility of the composition had already been demonstrated. Each of the six batches of Penncap M suspended in xanthan gum produced in 1972 passed the cricket bioassay test (PX 504; PX 544; Tr. 746-47), as well as Pennwalt's other two quality control tests for those batches (PX 544; Tr. 747-49). The success of xanthan gum had been established as early as November 8, 1971, when Pennwalt concluded that RD-4237 was "effective." (TX 134 at Bates 01602.)

[10] Furthermore, to allow federal regulatory laws to control the patent law meaning of "public use" or "on sale" would result in a haphazard operation of the Patent Office. (Tr. 1552.) The objectives of the EPA and the Patent Office differ. A use or sale labeled "experimental" by a government regulatory agency is not necessarily "experimental" under the patent laws. As stated before, a claimed invention may be complete under the patent laws while remaining experimental in the regulatory sense. In those few cases which focus on this issue they have indicated this difference. For example, *In re Hartop*, 311 F.2d 249, 257-60, 50 CCPA 780 (1962), held that the utility of a pharmaceutical invention sufficient to premise patentability does not depend on absolute proof of safety. Proof of reduction to practice of a pharmaceutical inven-

tion does not require Food and Drug Administration approval or proof of commercial marketability. *Campbell v. Wettstein*, 476 F.2d 642, 646 (Cust. & Pat.App.1973); *In re Anthony*, 414 F.2d 1383, 1396, 56 CCPA 1443 (1969). The mere fact that an electrical device was sold before Underwriters Laboratory approval does not avoid the statutory bar of § 102(b). *Interroyal Corp. v. Summons Co.*, 204 U.S.P.Q. 562, 565-66 (S.D.N.Y.1971).

Armak also contends that the data gathered by Pennwalt of field tests under the EPA temporary permit indicates experimentation under the patent laws. The Court is again unable to agree. The experimental data collected by Pennwalt under the EPA temporary permit consisted of the results of spraying Penncap M upon crops in the field. The Penncap M user diluted the claimed composition many times. For example, controlling oriental fruit moth on peaches, the Penncap M temporary label recommended 1-2 parts Penncap M to 400 parts water (TX 186C at Bates 05703). For the control of tomato worms, the label recommended 1 part Penncap M to 100 parts water. At 1:100 dilution, the concentration of xanthan gum sprayed by the field user is 0.003%, far below the lower limit claimed in the '292 patent. (TX 201.) Even at the minimum 1:5 dilution suggested for insecticide concentrates by Dr. Scher, Pennwalt's expert (Tr. 1084), the concentration of xanthan gum is only 0.06%, still below the '292 claims. Certainly, any "experimental use" by field users in 1972 was outside the claims of the '292 patent.

[11] It is well settled that experimentation to perfect non-claimed features of an invention does not fall within the experimental use exception to the § 102(b) bar. *In re Theis*, 610 F.2d 786, 791 (Cust. & Pat.App.1979); *Gould, Inc. v. United States*, 217 Ct.Cl. 167, 579 F.2d 571, 582 (1978); *Carborundum Co. v. Combustion Engineering, Inc.*, 505 F.Supp. 1011, 1020 (D.Del. 1981).

[12, 13] However, there are other factors in this case which indicate that the

public use and sales of the claimed composition in 1972 were not for experimental purposes under § 102(b). Armak shipped over 400 pounds of RD-4237 to Pennwalt in 1972 knowing that it would be used to suspend Penncap M according to the claims in the '292 patent. Every witness examined on the subject testified that Armak did not restrict in any way Pennwalt's use of the RD-4237. (Tr. 129-30; 355-56; 489; 618; 716; 831; PX 908 at 66; PX 901 at 92.) The absence of any restriction by the patentee on the uses of a patented invention is indicative of a non-experimental purpose. *Egbert v. Lippman*, 104 U.S. 333, 336, 26 L.Ed. 755 (1881). To avoid the on sale bar the inventor must show that the transferee lacked authority to use the invention or exploit its commercial value but where an inventor sells or delivers an invention to another without any enforceable obligation for the other to hold the invention for experimental purposes only, the unrestricted sale or delivery will invalidate the patent. *Kock v. Quaker Oats Co.*, 681 F.2d 649, 655 (9th Cir.1982), cert. denied, — U.S. —, 103 S.Ct. 787, 74 L.Ed.2d 994 (1983).

[14, 15] Another factor that is indicative of non-experimental purpose is the failure to require test reports. *Carborundum Co. v. Combustion Engineering*, *supra*, at 1020, 1027. The evidence in this case clearly demonstrates that Armak did not require Pennwalt to report back to it any results of its use of RD-4237 (Tr. 129, 489, 716, 813). Where a person has authority to use an invention commercially or sell to others without any duty to experiment further, there is a sale within the meaning of § 102(b) and the experiment exception does not apply. *Kock v. Quaker Oats Co.*, 681 F.2d at 656.

The evidence also clearly indicates that Pennwalt's primary motive in seeking an EPA temporary permit to ship 40,000 gals. of Penncap M between March and December, 1972 (TX 146), was commercial in order to recover part of its development expenses and to test the market (Tr. 1329). The temporary permit itself indicates that only 1.2% of the allotted 40,000 gals. was to be

supplied to researchers for the collection EPA data (TX 146; Tr. 1327-28).

Also, President Spooner of Agchem, a division of Pennwalt, advised the Pennwalt Executive Committee in 1972 that he was doing everything in his power to bring Penncap M to the market immediately (Tr. 677). It was Pennwalt's persistent objective to "make money" from sales under the EPA temporary permit, and to begin recapturing part of its research and development costs associated with Penncap M (Tr. 856, 1384). Manufacturing data from 1972 was also used to generate a cost-per-gallon figure (PX 711). Data collected under the temporary permit was used to set a sales price and gross marginal goal for Penncap M (TX 183 at Bates 04213; Tr. 637-38, 644-46). All of these activities demonstrate that Pennwalt was concentrating in 1972-1973 on the commercial aspects of Penncap M and did not involve any experimental aspects that would effect the on sale bar of § 102(b).

[16] It is well established that market testing and product introduction are not experimental uses. *Omark Industries, Inc. v. Carlton Co.*, 652 F.2d 783, 787 (9th Cir. 1980); *In re Theis*, *supra*, 610 F.2d at 793.

[17] A final factor indicates that the sales made in 1972 could not be considered experimental use to lift the bar of § 102(b). Pennwalt, not Armak, was the entity which caused the patented dispersion to be sold to Helene Chemical, Borden and Stauffer in 1972. The law is clear that the experimental use exception to the public use and on sale bar of § 102(b) applies to experiments of the inventor or persons under his control, not to third parties. *Magnetics, Inc. v. Arnold Engineering Co.*, 438 F.2d 72, 74 (7th Cir.1971); *Bird Provision Co. v. Owens Country Sausage, Inc.*, 379 F.Supp. 744, 747-48 (N.D.Tex.1974), aff'd, 563 F.2d 369 (5th Cir.1978). When the sales in question were made they were made by Pennwalt which was not under the control of Armak and even if Pennwalt's activities could be

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considered experimental under patent law, they would not inure to Armak's benefit.⁷

Based on the evidence in this case, the Court finds that Pennwalt has demonstrated by clear and convincing evidence that the claimed invention was in public use and on sale in this country more than one year before the critical date of April 1, 1974. *Paeco, Inc. v. Applied Moldings, Inc., supra*, 362 F.2d at 872. The Court also finds that Armak has failed to sustain its burden of showing that such uses and sales were for experimental, not commercial, purposes by a preponderance of the evidence much less by full, unequivocal and convincing evidence. *Smith & Griggs Mfg. Co. v. Sprague*, 123 U.S. 249, 264, 8 S.Ct. 122, 129, 31 L.Ed. 141 (1887).

Accordingly, the Court concludes the '292 patent is invalid because the patented invention was in public use and on sale more than one year before the critical date in violation of 35 U.S.C. § 102(b).⁸

II. ARMAK'S STATE LAW CLAIMS

As indicated earlier, Armak has asserted state law claims contending that Pennwalt is liable for its profiting from Nemeth's invention which it alleges was a trade secret from mid-1972, when Pennwalt adopted its use, to mid-1978, when the Nemeth patent issued. (D.I. 128, p. viii.) This liability is alleged to exist for the breach of the 1963 Product Development Agreement between the parties and/or the unauthorized use by Pennwalt of the then trade secret and/or the resulting unjust enrichment of Pennwalt from the use of the trade secret which was then confidential information. (*Id.*) Because of the ambivalence of the parties' conduct and actions with respect to their dealings in this matter, additional facts must be considered.

7. As will be discussed later, this was not a joint venture with Armak.
8. In view of the Court's finding of invalidity of the '292 patent based on 35 U.S.C. § 102(b), it is unnecessary to discuss Pennwalt's other grounds of invalidity.

1. Background Facts

Pennwalt entered the field of microencapsulation upon its acquisition of Wallace & Tiernan in 1969 and concentrated on encapsulated pesticides (Tr. 874-75). Methyl parathion was selected for encapsulation because its high toxicity would benefit from the toxicity reduction and slow release afforded by encapsulation (Tr. 875-76). Chester DeSavigny of Pennwalt was the inventor of Pennwalt's encapsulated methyl parathion product, Penncap M, which became the subject of U.S. Patent No. 3,959,464, issued May 25, 1976 (TX 166).

In May of 1970, Pennwalt's people recognized that Penncap M could not be used in the field in a water system without the addition of some suspending and/or emulsifying agents (PX 501; Tr. 1309) because the encapsulated material settled to the bottom and it was difficult to disperse it (TX 193, p. 38). Various persons at Pennwalt's facilities attempted to solve the suspension problem on a "hit or miss" approach but none were knowledgeable in formulation chemistry (Tr. 638-69; 1310; 1361-62), and the solution to the problem was without much success.

On February 4 and 16, 1971, Pennwalt's personnel, Obren Keckemet and Harry Culver, wrote to six companies for help in finding a suspending agent for Penncap M and sent them samples of unsuspended Penncap M: Woodbury Industries, Inc., Emery Industries, Inc., Retzloff Chemical Company, Witco Chemical Company, Inc., Atlas Chemical Industries, Inc., and Armour Industrial Chemical Company ("Armak") (TX 100). These companies were mostly surfactant⁹ suppliers (Tr. 1280). This request for technical assistance from other companies was consistent with Pennwalt's past practices (Tr. 1300; 1310) and was, and is, a common practice within the chemical industry to render technical or customer

9. A surfactant is a material which will move preferentially to the interface between oil and water phases, thereby lowering interfacial tension (Tr. 1075; 1077).

services when requested (Tr. 661-62; 770). Typically, a chemical supplier, at the request of a customer or potential customer, will analyze a customer's problem and suggest a specific material to be used with the customer's product free of charge (Tr. 716; 662; 1352; 1211). Well known as a selling tool, the technical service can develop sales of the supplier's material for use with the customer's product (Tr. 770; 716).

Pennwalt's request to Armak, as well as to the other five companies contacted, was for this customer service type of assistance. Pennwalt's request to Armak was directed to Dr. Walter W. Abramitis who was the Section Head of Armak's Agriculture Chemical Research and Pennwalt's contact with Armak in the agricultural chemical field (PX 901, p. 4; Tr. 1301). Part of Abramitis' duties for Armak was problem solving for customers, that is, "if a customer needed a specific product that he wanted, why, I would try to adapt our chemicals to his needs." (PX 901, p. 9.) Pennwalt had been since 1960 a customer of Armak buying hundreds of thousands of dollars annually of amides and surfactants (Tr. 682; 812).

When Culver of Pennwalt wrote to Abramitis on February 16, 1971 regarding Pennwalt's suspension problem, he specifically asked if Abramitis could "find a combination of those good Armour surfactants that will do the job." (TX 100.) Abramitis brought the problem to Sidney Shapiro, then assistant director of research for Armak (Tr. 196-98). Shapiro turned the problem over to Nemeth (Tr. 201; 66). Nemeth, on April 1, 1971, performed his first work in suspending the Penncap M samples received from Pennwalt (TX 103). Prior thereto, Armak had on hand a sample of "Kelzan" xanthan gum which had been ordered by Shapiro (Tr. 231). Kelzan had been used before by Armak as a thickener (Tr. 222).

Both Nemeth and Shapiro knew that gums were useful as suspension agents and Nemeth was led first to try Kelzan, an industrial grade xanthan gum, manufactured by Kelco Company (Tr. 97-100; 102; 253-54). Nemeth's April, 1971 experiment

required him to weigh out the suspending agent into Penncap M, stirring the mixture with an agitator at room temperature, and observing the results 24 hours later (Tr. 105-106). Nemeth performed additional work in August and September, 1971, screening additional possible suspending agents (TX 129), the result of which indicated that besides Kelzan xanthan gum, which showed the best results (TX 105), other gums also worked as suspending agents (PX 13, 18; Tr. 533-42).

Sometime shortly after April 28, 1971, formulations bearing "TD" code numbers designated by Abramitis were sent by Armak to Pennwalt (Tr. 207; TX 106). Pennwalt analyzed these formulations also with others submitted by other companies and those generated by Pennwalt. Boiled down to specifics, it appeared by November, 1971 to Pennwalt that Armak's submission as RD-4237 appeared to be "really effective" (TX 134). At no time did Armak disclose to Pennwalt the chemical identity of RD-4237 as xanthan gum (Tr. 254-55).

In October, 1971, Keckemet learned for the first time: (1) that Armak was "asking for some kind of money compensation" for Pennwalt's use of RD-4237 (Tr. 1357), (2) that Armak was "applying for a patent for this material as a suspending agent and tentatively they intend to charge us royalties of \$.07/gal., based on selling price of Penncap M if patent is issued, or \$.04/gal. if patent is not issued (this in addition to cost of material)," and (3) that Armak "will be buying this material from another company" (TX 3). Nothing, however, was apparently mentioned of royalties until later.

In 1971, Pennwalt began producing Penncap M in a pilot plant at Bryan, Texas, which produced 20-gallon size batches (Tr. 899, 734). At that time Sponto 176, a suspending-emulsifying agent supplied by Retzloff Chemical Co., was used in producing Penncap M (Tr. 1310). Keckemet testified that Pennwalt selected Sponto 176 over Armak's RD-4237 because Pennwalt had more experience with Sponto 176, test data indicated that it was biologically and toxicologically safe, and Pennwalt did not know

whether RD-4237 would be cleared by the EPA whereas Sponto 176 had been so cleared (Tr. 1308, 1309, 1339-40).

In March, 1972, a full sized production plant came on stream at Bryan, Texas, capable of producing 750 gallon batches (Tr. 898). The first full-size production batches of Penncap M used Sponto 176 but problems resulted: the Penncap M settled and became non-pourable and more seriously, the methyl parathion began leaching out of microcapsules into the surrounding aqueous phase (Tr. 935, 924). As a result of these problems during production, Pennwalt in July, 1972 stopped using Sponto 176 and switched to Armak's RD-4237 agent and the first batch so run was on July 18, 1972 (PX 508, Tr. 922-23; 936).

After July 18, 1972, all of Penncap M was produced using RD-4237 as the suspending agent and Armak had knowledge of this and indeed had shipped an additional 400 pounds in July and August, 1972 for these runs. (D.I. 99, ¶¶ 3.24 & 26.) It was then on August 4, 1972, that Roy deVries, Armak's Director of Marketing, wrote to Robert Toth, Agchem's newly appointed General Manager, suggesting that the parties "should sit down and come to some agreement on the terms under which we would be prepared to arrange this." (TX 18.) Toth responded that "he would confer with Pennwalt's technical and manufacturing people" and that "[w]e should sit down and discuss the agreement as soon as we determine the future of your product." (TX 19.) Toth testified he meant by "future of your product" from a business standpoint rather than a formulation standpoint. (Tr. 838.) Pennwalt was then beginning a "test marketing program" and it appeared to Toth that Armak knew that Pennwalt was using RD-4237 in that program. (Tr. 836-38.)

Next, on November 22, 1972, G.F. Smitskamp, Vice President of Armak, wrote to Toth raising three points: (1) a possible agreement on the suspending agent for Penncap M, (2) a possible agreement concerning third party investigations of unpatented products submitted by Armak to Pennwalt, and (3) when Armak should file

for foreign patent applications on Penncap M's suspending agent and whether Pennwalt would be willing to pay for the filings. (PX 540.) Toth responded on January 8, 1973 that the decision to file in foreign countries and the expense was up to Armak. (TX 25.) Toth testified that his response to the possibility of royalty payments in his letter to Smitskamp referred to possible royalty agreements in foreign countries if Pennwalt decided to market Penncap abroad. (Tr. 799-800.)

Toth met with Armak representatives on March 27, 1973, and expressed an unwillingness to discuss a royalty until Armak's patent status was determined (TX 28). Toth stated that, once Armak produced a patent for the suspending agent, he would forward it to Pennwalt's patent department for review (Tr. 801).

Smitskamp testified that during a telephone call he made to Toth on April 24, 1973, Toth agreed that any royalty agreement eventually reached would be retroactive to include all RD-4237 shipments beginning in April, 1973. (TX 29A; Tr. 457.) Smitskamp also testified he told Toth that if the royalty agreement was not made retroactive, the 300-pound shipment now on the loading dock would not be delivered to Pennwalt (Tr. 457). Toth recalled the conversation but not the threat to cut off the supply of RD-4237 or that he agreed to retroactivity of any future royalty agreement; he did recall telling Smitskamp that Penncap M was being test marketed to determine how the product was accepted at proper selling price. (Tr. 802.) Smitskamp offered to send a royalty agreement and Toth replied, "Fine send me an agreement, send us a draft, and we'll take a look at it." (Id.) Smitskamp sent Toth a confirmatory letter on April 25, 1973 stating, "we are proposing a royalty of 7% on the value of your finished product," that he appreciated Toth agreeing to the retroactive condition, and that he would submit a Licensing Agreement. (TX 29.) Toth never responded to this letter. (Tr. 846.)

On August 3, 1973, Kelco Company at Pennwalt's request reverse-engineered a

sample of Armak's RD-4237 and determined its identity to be xanthan gum that was well within the specification range of Kelzan¹⁰ (TX 31). The identity of RD-4237 was confirmed when Shapiro wrote to De-Savigny on June 18, 1974, confirming that Armak would supply Pennwalt with 6,000 pounds of RD-4237 at 600 pounds per month starting October 1, 1974, and by error included a shipping order to that letter which identified RD-4237 as Kelzan (PX 510).

In April 1974, Pennwalt received the draft royalty agreement from Armak which had been promised the year before. Toth expressed a willingness to buy xanthan gum from Armak under a resale agreement if Armak's price was competitive (Tr. 818-19; TX 42). Throughout 1974 Armak insisted its patent would issue and Toth maintained Pennwalt's position that there would be no negotiations until the patent issued and was reviewed by Pennwalt's patent department (Tr. 820-21; 841-42).

No further negotiations took place until President Spooner of Agchem met with Armak Vice President F.L. Linton on May 23, 1978, and for the first time Armak asserted that the Product Development Agreement ("PDA"), dated November 26, 1963 (TX 80), controlled the question of royalties for Pennwalt's use of RD-4237 (Tr. 648). Further negotiations were fruitless and this lawsuit was filed on March 26, 1979.

When Pennwalt learned independently of Armak that RD-4237 was Kelzan xanthan gum, Pennwalt elected to discontinue buying Kelzan from Armak. (D.I. 99, ¶ 3.23.)

2. The Product Development Agreement

The predecessors of Armak and Pennwalt began their cooperative efforts in the field of agricultural chemicals in the late 1950's (Tr. 404) and this eventually resulted in the execution of the PDA, dated November 26, 1963. (Tr. 407; TX 80.) The intent of the PDA was to complement the respective

10. In November and December, 1972, DeSavigny, reporting on a study he made of suspending agents, came to the belief that RD-4237 was xanthan gum because it behaved in physical

strengths of the two companies as the recitals of the agreement show:

1. The purpose of this agreement is to establish a basis for cooperation between PENNSALT and ARMOUR and *the field for this cooperative effort shall be the development of pesticides*, to include, but not limited to, insecticides, fungicides, herbicides, rodenticides, plant growth regulators, nematocides, and harvest aid chemicals.

2. ARMOUR has developed chemicals and formulations showing possible pesticidal activity and is continuing research and formulation development on products of this type. It is desired to have these materials tested further in laboratory, greenhouse, and the field in order to develop said products to commercial usage.

3. PENNSALT has pesticide development personnel and facilities and desires to screen and test these chemicals and formulations for *pesticidal activity* for the purpose of developing additional pesticides which may be marketed by PENNSALT in the United States and in foreign countries.

(TX 80; emphasis added.)

Armak contends that the submission of RD-4237 (xanthan gum) to Pennwalt was pursuant to the PDA and thus Pennwalt is obligated to enter into a licensing agreement and pay royalties thereunder. Pennwalt's failure to do so, Armak argues, amounts to a breach of the PDA. Mr. Karl Bierman, a former Vice President of Armak, and Mr. Richard Reck, Armak's Director of Commercial Development, testified that it was their opinion and belief that the PDA clearly embraced Armak's submission of RD-4237. (Tr. 418-19; 501.) Their testimony is flatly contradicted by the testimony and other witnesses which will be hereinafter discussed.

[18] Faced with such contradictory testimony, courts turn, as an important aid to the construction of a contract, to examine

characteristics as General Mills XB23 and Kelzan which he had tested and knew were xanthan gums (PX 522; Tr. 955-56).

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the practical construction placed on the agreement by the parties themselves. *American Bemberg Corp. v. United States*, 150 F.Supp. 355, 361 (D.Del.1957), *aff'd*, 253 F.2d 691 (3d Cir.), *cert. denied*, 358 U.S. 827, 79 S.Ct. 45, 3 L.Ed.2d 67 (1958); *see Canister Co. v. National Can Corp.*, 71 F.Supp. 49, 50 (D.Del.1946), where Judge Leahy adopted the wisdom of Lord Chancellor Sugden in *Attorney General v. Drummond*, 1 Drury & Warren 353, 368, "Tell me what you have done under a deed, and I will tell you what that deed means." This advice is particularly applicable to this case.

First, the above recitals of the PDA refer to Armak's submission of an active pesticide or to the submission of an Armak chemical which chemically reacted with a Pennwalt compound to create an active pesticide. Here the submission was xanthan gum which is an "adjuvant"—an inert ingredient in a pesticide formulation which improves the physical characteristics of the formulation, but does not react chemically with other components of the formulation. (PX 908 at 61-62; PX 901 at 19; Tr. 216, 220.)

Second, the first license agreement between Pennwalt and Armak which arose under the PDA related to an amine-endothall salt. (TX 67.) Pennwalt's endothall herbicide was chemically reacted with Armak's patented amine, resulting in herbicidal salt which produced a more active product than Pennwalt's endothall herbicide. (Tr. 508, 688.)

Third, the amine-endothall license agreement was premised on Armak's patent or pending patent applications and absent the patent, Pennwalt would not have entered into the license agreement (Tr. 694-96). All later submissions of Armak under the PDA included active pesticides and each agreement arising therefrom was in the form of a patent license (Tr. 686-87). No licensing agreements between Pennwalt and Armak were ever directed to inert substances and Pennwalt never paid a royalty to Armak for an inert adjuvant (Tr. 687; PX 901 at 38).

Fourth, from 1972 through 1974, Smitskamp, Armak's Vice President, was actively

seeking Pennwalt's agreement to pay a royalty on RD-4237, but at no time did anyone at Armak refer to the PDA as a basis for such an agreement (Tr. 488-89). It was not until after Linton became Vice President of Armak's Chemical Division and on May 23, 1978, that the PDA was ever mentioned with respect to RD-4237 (Tr. 648).

Fifth, another indication that the parties did not believe the PDA was applicable to RD-4237 is the fact that Section 4 of the PDA was not followed by Armak. Section 4 provides, in part:

Each company will keep its own invention records and seek its own patents, *and will keep the other party fully informed of the patent application status* of each of its inventions relating to pesticide chemicals covered by this agreement.

(TX 80; emphasis added.)

In 1965, patent counsel for the parties reached an understanding as to how the parties would operate under this provision; Armak was to furnish drafts of Armak's patent applications to Pennwalt for comment before filing in the Patent Office. (PX 513 & 515.) However, no part of three Nemeth patent applications leading to the '292 patent were ever revealed to Pennwalt, apart from the allowed claims of the issued patent in 1978 (Tr. 654-55). Had Armak believed that the PDA covered RD-4237, the three applications would have been submitted to Pennwalt before filing.

Finally, Section 3 of the PDA required Armak to release to Pennwalt the identity of all material submitted for testing upon request of Pennwalt. That provision reads:

SECTION 3—LIMITATIONS

1. ARMOUR will release the chemical identification of compounds or other data on materials when submitted to PENNSALT for testing in accordance with Secrecy Agreement Letter dated February 17, 1961 [TX-70] and the supplemental letter of March 30, 1961 [TX-72] from L.M. Miller of ARMOUR to J.D. Watson of PENNSALT.

Although repeated requests by Pennwalt were made, Armak never revealed the identity of "RD-4237." Pennwalt asked Abramitis of Armak for the identity of RD-4237 on the following occasions: May 3, 1971 (TX 109); August 2, 1971 (TX 177); November 3, 1971 (TX 8); and during a November, 1972 meeting in Tacoma, Washington (TX 21 at Bates A006229; Toth 794-95). According to the testimony of Armak's witness Bierman, if RD-4237 was covered by the PDA, its identity should have been disclosed to Pennwalt. (Tr. 432-33.) This is simply another example of Armak's conduct which leads to the conclusion that PDA did not apply to RD-4237.

[19] Accordingly, having considered and weighed the testimony of the witnesses, the documentary evidence, and the conduct of the parties, the Court concludes that RD-4237 (xanthan gum—an inert adjuvant) was not within the scope of PDA and therefore the PDA affords no basis for holding Pennwalt liable for damages for breach of express contract.

3. *Implied Contract or Unjust Enrichment*

[20] Armak contends that it is entitled to a finding that Pennwalt is liable to it upon either of two alternative theories: (1) breach of contract implied from the unauthorized use of its trade secret, or (2) unauthorized use of its trade secret unjustly enriching Pennwalt.

The difficulty in applying these two theories to this case is the lack of proof by Armak of a factual basis necessary to support those theories.

The Court is convinced by the credible evidence that on February 16, 1971, when Pennwalt first requested Abramitis of Armak, as well as the other five chemical companies, for help in solving Penncap M's dispersion problem, it was seeking free technical or customer services. This was a common practice in the chemical industry. Pennwalt had been a long time customer of Armak and it hoped that Armak's "good surfactants" could solve its dispersion problem with Penncap M. Pennwalt believed

that Armak would benefit by its sales to Pennwalt. Indeed, Armak provided customer services regularly to others. Nemeth, who spent about one-half of his time between 1966 through 1979 on technical services activities (Tr. 101), never knew of an occasion when Armak attempted to charge a customer for technical services except for RD-4237. Shapiro, Nemeth's superior, testified that technical or customer services were usually compensated by sale of their products (Tr. 214-15; 218). Abramitis handled between 5 to 10 technical service requests a year during his 30-year tenure with Armak and he never once charged for such services or was aware of charges by Armak for such service to customers. (PX 901 at 10.)

Furthermore, when Armak shipped the coded samples of xanthan gum-suspended Penncap M to Pennwalt on April 28, 1971, Armak never indicated that compensation was expected, never placed any restrictions or controls over the use or disclosure of the materials, and never indicated that Armak was establishing some kind of confidential relationship with Pennwalt with respect to its request for help. Indeed, Armak remained silent in this regard while Pennwalt tested the samples, acquired more RD-4237 from Armak, and voluntarily reported back the "good results" in June 1971. While it is true, that the identity of RD-4237 was not revealed at that time or any other time intentionally by Armak, the purpose and use of the material was certainly disclosed because it was prepared and shipped in response to Pennwalt's request for specific technical services. The "benefit" conferred on Pennwalt and the "service performed" by Armak was completed when Pennwalt was sent the dispersion material on April 28, 1971. An uncommunicated expectation of remuneration at the time services are performed does not give rise to an implied or quasi-contract when Pennwalt had no reason to believe that compensation was expected for that service. See *Bloomgarden v. Coyer*, 479 F.2d 201, 202 (D.C.Cir. 1973).

Equally important is the fact that in April, 1971 Armak did not indicate that by responding to Pennwalt's request for customer service, Armak was attempting to establish a confidential relationship. If this was Armak's intent, it should have put its customer Pennwalt on notice of this condition. The Court is convinced that Armak did not do so at that time because it considered its help to Pennwalt to be free customer service. It was not until October, 1971, as a complete afterthought, that Armak decided to file a patent application and tentatively to seek some form of royalty (TX 3).

After Pennwalt began to manufacture and sell larger batches of Penncap M suspended in RD-4237 in July and August, 1972, of which Armak was aware (TX 22) having shipped an additional 400 pounds to Pennwalt at Bryan, Texas, and it having appeared that Penncap M would have an excellent commercial future, Armak then began to agitate for an agreement with Pennwalt for the payment of royalties. Apparently, Armak, through Smitskamp and Linton, was seeking an *Aronson*-type contract [see *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257, 99 S.Ct. 1096, 59 L.Ed.2d 296 (1979)], whereby Pennwalt would agree to pay certain royalties if a patent issued to Armak and lower royalties if a patent did not issue, and to pay such royalties retroactive to April, 1973. These specific requests for royalties caused Pennwalt to take the position, which it has consistently maintained ever since, that it would only pay royalties if Armak obtained a valid patent on Penncap M's suspending agent.

These conflicting positions of the parties do not give rise to any expressed or implied contract to pay royalties for services which the parties originally considered and treated as ordinary free customer services.

In any event, even the identity of RD-4237 was no longer a secret after August 3, 1973. At that time, Kelco Company by reverse engineering had determined at

Pennwalt's request that RD-4237 was xanthan gum and probably Kelco's own Kelzan (TX 31). Trade secret law, even if it were applicable here, does not afford protection against discovery by fair and honest means, such as independent invention, accidental disclosure or reverse engineering. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 474, 94 S.Ct. 1879, 1882, 4 L.Ed.2d 315 (1974).

Moreover, on the proof adduced in this case, no confidential relationship existed between the parties on the RD-4237 issue. Their relationship with respect to RD-4237 began with a customer's request for technical services from a supplier. The technical services were given to Pennwalt without restrictions on its use or disclosure, nor was it stated to be in confidence. Thus, the Court finds that the necessary elements for a recovery against Pennwalt based on a trade secret has not been demonstrated. The Court therefore concludes that Armak has not established Pennwalt's liability on the theory of breach of implied contract or unjust enrichment.¹¹

III. ATTORNEY'S FEES

Pennwalt, in seeking reasonable attorney's fees on the basis that this is an "exceptional" case within the meaning of 35 U.S.C. § 285, advances two grounds: (1) Armak successfully opposed Pennwalt's summary judgment motion thereby forcing Pennwalt to incur far larger attorney's fees in proceeding with a bench trial than would have resulted if it had been disposed of by summary judgment, and (2) Armak intentionally practiced fraud upon the Patent Office during the prosecution of the three patent applications leading to the issuance of the '292 patent.

[21] First, the Court finds no merit to Pennwalt's first ground. There were genuine issues of material fact in dispute which could not be resolved by summary judgment thereby requiring a bench trial to resolve the disputed facts. The Court can-

11. Because of this ruling, it is unnecessary for the Court to pass on Pennwalt's affirmative defenses that Armak's state law claims are

barred by the statute of limitations, and doctrine of laches, waiver and estoppel.

not attribute bad faith to Armak for opposing plaintiff's summary judgment motion.

[22] Second, the Court has found the '292 patent to be invalid under the "in public use" and "on sale" bar of 35 U.S.C. § 102(b). It has also intentionally refrained from passing on all of Pennwalt's claims that the '292 patent is unenforceable on the ground that fraud was practiced on the Patent Office. The Court sees no need to "beat a dead horse to death" in order to determine that the '292 patent already found to be invalid is also unenforceable because of fraud. Therefore, without specifically deciding whether all of Armak's alleged acts amounted to fraud, the Court does find that the prosecution of the three patent applications leading to the '292 patent leaves much to be desired and that the conduct of Armak before the Patent Office was less than candid. The fact that this Court has invalidated the patent based on the statutory bar of § 102(b) creates the suspicion that had the relevant facts been disclosed in the beginning, the Patent Examiner would not have issued the patent. However, Armak has made a showing that it sincerely believed that the "experimental use" under the federal environmental laws could be equated with "experimental use" under the patent laws so as to take the case out of the § 102(b) bar. While this bona fide belief, which was not disclosed to the Patent Office, falls short of standards required for patent practice, nevertheless, it was sufficient to support a good faith belief in the patent's validity. Consequently, based on this finding, the Court, in the exercise of its discretion, holds that this case is not "exceptional" for the purpose of requiring Armak to pay Pennwalt's attorney's fees under 35 U.S.C. § 285. See *Union Carbide Corp. v. Borg-Warner Corp.*, 550 F.2d 355, 362-63 (6th Cir.1977); *Indiana General Corp. v. Krystinel Corp.*, 421 F.2d 1023, 1033-34 (2d Cir.1970), cert. denied, 398 U.S. 928, 90 S.Ct. 1820, 26 L.Ed.2d 91 (1970).

This opinion shall constitute the Court's findings of fact and conclusions of law required by Rule 52(a), Fed.R.Civ.P.

Judgment will be entered in accordance with this opinion.



Frances E. BELL

v.

John C. BRENNAN, et al.

Civ. A. No. 83-1185.

United States District Court,
E.D. Pennsylvania.

Aug. 22, 1983.

Civil rights action was brought. Defendants moved to dismiss. The District Court, Giles, J., held that complaint alleging that plaintiff was erroneously issued citation for reckless driving after being involved in collision with automobile being driven by police officer failed to state claim for relief under federal civil rights law.

Motion granted.

1. Civil Rights \Leftrightarrow 13.12(5)

Count in complaint alleging that plaintiff was erroneously issued citation for reckless driving after being involved in collision with automobile being driven by police officer failed to state claim for relief under statute prohibiting discrimination based upon race where there was no allegation that plaintiff was treated unfairly and unequally on account of her race. 42 U.S.C.A. § 1981.

2. Civil Rights \Leftrightarrow 13.12(7, 8)

Valid cause of action under section 1983 is not made out simply by asserting that common-law tort was committed by state official; rather, plaintiff must allege deprivation of some constitutional right under color of law. 42 U.S.C.A. § 1983.

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